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THE JOURNAL OF AIR LAW AND COMMERCE

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AERONAUTICAL LAW DEVELOPMENTS, 1939

By GEORGE B. LOGAN*

I am quite aware of the fact that most of you are much more interested in knowing something about the workings and operations of the Civil Aeronautics Act of 1938 than in any dull and dusty reports of the decisions of the courts during the past year.

There are, however, some very interesting cases, as interesting, I assume, as a lefthanded appendectomy to a surgeon; and these cases I would like to call to your attention.

JENSEN V. UNITED AIR LINES TRANSPORT CORP.[1]

Last year, your attention was called to the case of *Dineen et al* v. *United Air Lines Transport Corp.*,[2] in which the New York Supreme Court held that the United Air Lines was not doing business in the City or State of New York; that the maintenance of a ticket office in New York, without performing any of the functions of transportation, did not make it subject to suit in New York. This decision was followed by a lower court in the case of *Jensen* v. *United Air Lines Transport Corp.*, growing out of a United Air Lines accident in Utah. However, the Appellate Division of the New York Supreme Court reversed the lower court in December of 1938 and held that the Jensen suit could be maintained in the State of New York, i. e. that United was doing business in New York.

GROSS AS ADMIN. V. UNITED AIR LINES TRANSPORT CORP.[3]

In another case arising out of the same accident, that of *Gross* v. *United Air Lines*, the U. S. District Court held that the United Air Lines could be sued in the State of New York.

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*Legal counsel for National Association of State Aviation Officials.

1. 235 C. C. H. Aviation Law Service, par. 3055, decided June 21, 1938; reversed 255 App. Div. 611, 8 N. Y. Supp. (2d) 374, (December 23, 1938).
2. 166 Misc. 422, 2 N. Y. Supp. (2d) 567 (January 27, 1938).
3. 235 C. C. H. Aviation Law Service, par. 3058 (D. C. S. D. N. Y. March 8, 1939). See comment on this series of cases in 10 J. of Air Law 430 (July, 1939).

MORRELL V. UNITED AIR LINES TRANSPORT CORP.[4]

Three months later, another judge of the United States District Court, in the case of *Morrell* v. *United Air Lines,* in a suit arising out of the 1938 accident near Cleveland, held again that the United Air Lines could be sued in the State of New York.

There seems, therefore, to be three decisions now, all contrary to the *Dineen* decision, and all by courts of higher authority, which appear to establish the rule that it is not necessary for an airline corporation to be actually operating the air line in a state to be subject to the jurisdiction of that state's court.

Obviously, if the United Air Lines is successful in its present application to use the North Beach Airport as an alternate terminus, the question will be academic rather than real.[5] It is, however, real in other instances. The United Air Lines has opened a ticket office in the City of St. Louis. Its nearest line is at Des Moines, Iowa. If the Missouri courts should follow these two federal decisions and the New York decision, then a person living in Missouri and having a cause of action against the United Air Lines could prosecute it in Missouri and would not have to go to a state where the company is actually operating.

S. S. PIKE & CO., INC. V. CITY OF NEW YORK[6]

New York has also produced another interesting case, which, as I recall, involves a subject discussed at the Omaha meeting. There was considerable discussion there about the right to regulate, and the necessity for regulating the sky writers and the flyers with advertising banners.

The City of New York passed an ordinance authorizing the police commissioner to issue permits for towing advertising banners and to suspend or revoke these permits where necessary for public safety. There were several accidents involving this type of flying and the police commissioner suspended all existing permits while an investigation was being made to determine the cause, and probably the necessity of future regulation. The S. S. Pike Co. brought an injunction suit to restrain the police commissioner from suspending its permit, and in the suit, raised the point that the ordinance was unconstitutional. The Supreme Court of Queens County, in a decision handed down on September 1, 1938, just about the time of our Omaha meeting, held that the ordinance was valid, sustained the suspension

4. 235 C. C. H. Aviation Law Service, par. 3059 (D. C. S. D. N. Y. June 6, 1939). See digest of 10 J. of Air Law 520 (October, 1939).
5. This application was granted by the Civil Aeronautics Authority on November 7, 1939.
6. 169 Misc. 109, 6 N. Y. Supp. (2d) 957 (September 1, 1938).

of the permits and refused to grant the injunction. We thus appear to have concrete evidence of the fact that city governments may strengthen, by proper ordinances, efforts of state authorities, in regulating airplanes where necessary. This rule of law, if sustained and continued, should offer real help to aviation state officials on the part of municipal officials.

GENTRY V. TAYLOR ET AL.[7]

South Carolina appears to have been forced to take a backward step in aviation by virtue of the language of its state constitution. The County in which the City of Spartansburg is located had voted a bond issue of $40,000.00, which was to be contributed to the Federal Government, the Federal Government to expend $300,000.00, through the W.P.A., for the purpose of building an airport at Spartansburg. A taxpayer raised the question that the bonds thus issued were void. Now the State Legislature had passed an act authorizing counties to issue bonds for these purposes. But the point was that the state constitution forbade the issuance of any bonds by counties, except for "ordinary county purposes". The Supreme Court held that the building of an airport was not an "ordinary county purpose" and that the Legislature was without authority to classify such an expenditure as an "ordinary county purpose."

The Supreme Court seemed to regret the necessity of reaching this decision, admitting that airports were desirable and that this was probably a wise expenditure, but held that the constitution could be amended by the methods therein provided if the taxpayers saw fit. This decision is contrary to the usual rule, in that, in determining what is a "county purpose", or what is a "municipal purpose," or what is a "governmental purpose," as these various phrases are used in state constitutions, the courts usually look for guidance, particularly in new problems, to the expressions of the State Legislature or to the expressions of the municipal governing body.

It is rather interesting to note that the Supreme Court of South Carolina evidently does not believe in "streamlining" its constitution.

There are some interesting cases arising in the field of negligence. I call your attention to one of them, chiefly because it is an example of the ingenuity of the legal profession, or rather of the lengths to which my professional brethern will go in attempting to establish a technical defense.

UNITED AIR SERVICES V. SAMPSON[8]

Out in California, an attorney, by the name of Sampson, hired

7. 235 C. C. H. Aviation Law Service, par. 1822 (S. C. - July 28, 1939).
8. 96 Cal. App. 29, Modified 96 Cal. App. 197, 86 Pac. (2d) 366 (Decem-

a plane for a charter trip from the United Air Services operated by Paul Mantz, whom, you will all remember, was the mechanic and assistant of Amelia Earhart for a long time. Mr. Sampson did not hire a pilot from Mr. Mantz, but hired his own pilot, one George Hoge. The plane was flown to Shandin Hills Airport near San Bernardino, and crashed in the attempt to take off. No one was killed but the plane was washed out. Mr. Mantz, or rather the United Air Services, operated by him, brought suit against Mr. Sampson, and in the trial court the technical defense to which I referred was sustained and Mr. Mantz was demurred out of court. The point was that the defendant, Sampson, the attorney, was not a licensed pilot; that he was not flying the plane; that although his pilot was a licensed pilot, his own liability, if any, was that of agency and that he could not be held as the principal of a licensed pilot in view of the fact that he himself was not a licensed pilot.

The California Appeals Court of the Second Division, in a decision handed down December 22, 1938, held that this technical point was a fine spun theory, but untenable, and the case was reversed and sent back for retrial.

Incidentally, in this case, at the trial, Amelia Earhart testified as an expert witness to the effect that the pilot was negligent in his operation of the plane.

GALER V. WINGS[9]

Another interesting negligence case comes to us from Canada, in the case of *Galer* v. *Wings*, decided by the King's Bench of Manitoba. In this case, the defendant company, "Wings", had undertaken to send a party into the interior of Canada to an inland lake. There were three passengers and they were each sold tickets, although it seemed to be a special chartered trip. The tickets provided that the passengers assumed the risk of the flight and that the company was not liable except for actual negligence of the pilot. What happened was that one of the blades of the propeller broke off at the hub and the engine was jerked out of its fastenings and the plane crashed.

Mr. Galer, badly injured, brought suit against Wings and among the defenses interposed was the assumption of risk created by the language on the ticket. The King's Bench Court gave this defense no more "room" than has been given that same defense by many of our United States courts. They held that such a ticket did not constitute a contract, because the passengers did not read it and did not

ber 22, 1938). See comment 10 J. of Air Law 417 (July, 1939).

9. 3 W. W. R. 481 (K. B. of Manitoba, Can.) 1938 U. S. Av. R. 177, 235 C. C. H. Aviation Law Service, par. 1225, decided November 11, 1938. See comment 10 J. of Air Law 414 (July, 1939).

sign it, and even if he had, it would have been contrary to public policy as applied to a common carrier.

The case was, however, decided in favor of the company, because the history of the propeller was that it had been recently inspected, that the defect which caused it to break could not be seen by any sort of inspection which the defendant company was equipped to make, that it could probably have been found only by an etching test or by magnaflux treatment, and that the rule of care imposed upon the company did not require it to make such tests nor hold it liable for failure to do so.

NOAKES EXECX. V. IMPERIAL AIRWAYS, LTD.[10]

Another case arising out of an airplane accident and coming within my classification of negligence is that of *Louise Noakes, Executrix,* v. *Imperial Airways, Ltd.* You will recall the crash of the Cavalier, with the loss of life of several of its passengers. One of them was Mr. Noakes. You will also recall that the Cavalier, being a flying boat, remained afloat a good many hours after striking the water. When suit was filed, it was filed in the U. S. District Court for the Southern District of New York, and the Imperial Airways made the defense that its liability was limited by the provisions of Title 46, U.S.C.A. 183,—part of the shipping code, which limited the liability of the owner of vessels to the value of the owner's interest in the vessel and the cargo. In this particular case, as you know, the value of the vessel and the cargo were nil as both had been lost. The court held, however, that this statute was not applicable to seaplanes; that although a seaplane could navigate on the water to a limited extent, it is primarily intended as a flying vehicle; and that Congress had no intention of including seaplanes within the Act. Particularly was this true because Congress had amended this entire section in 1937 when seaplanes were fully understood and fully known and had made no attempt to change the definition of "vessel" so as to include planes. The result was that the limitation which would have been a complete defense was not permitted.

DOLLINS V. PAN-AMERICAN GRACE AIRWAYS, INC.[11]

This decision that I have just mentioned was parallel to and followed a decision of another Judge of the U. S. Court for the Southern District handed down on May 4, 1939 in the case of *Sue Dollins, Administratrix* v. *Pan American Grace Airways.* You will recall the loss of the Pan American plane, which, on August 2, 1937, took off

10. 235 C. C. H. Aviation Law Service, par. 917 (D. C. S. D. N. Y.—July 26, 1939).

11. 27 F. Supp. 487 (D. C. S. D. N. Y. May 4, 1939); 235 C. C. H. Aviation Law Service, par. 914.

in Colombia for Cristobal, Canal Zone and was never seen again. Wreckage was found fifteen miles out from Cristobal. There were no survivors. The Court held in this case that the owner of the flying boat was not entitled to limit its liability for damages to the value of its interest in the ship and cargo.

We have had other cases on this point, some as far back as 1914, and the courts have consistently held that an airplane does not come within the definition of a vessel or of a motor boat or of a motor vehicle.

One more negligence case and I am through with this division.

PIGNET V. CITY OF SANTA MONICA[12]

This case, I think, is one of interest to all State Aviation Officials, although it is not the first case of its kind.

On Clover Field, near Santa Monica, the W.P.A. was engaged in work on the airport. The employees of W.P.A., in driving their trucks with materials to and from the site of operations, drove them over the runways. Complaints had been frequently made by aviators using the field, and particularly by one Pignet, an operator on the field, who had a lease on a hangar, including the right to conduct an air school. This operator had frequently complained to the manager of the field, which was owned by the City, the manager being employed by the City. On the day in question, the operator was landing on the field when he struck a truck driven by one Van Gundy, who was on the runway delivering materials to the W.P.A. job. The suit was filed against the City of Santa Monica, Van Gundy, the airport manager, and others. The defense of the City of Santa Monica was that its operation of the airport was a governmental function. The Court disposed of that in the manner in which it has been disposing of it in many cases, to-wit, the operation of an airport is a proprietary function, and the City in the operation of an airport, is liable just as a private owner. The Court also held that it was the duty of the City, in the exercise of ordinary care, to keep its runways free from obstructions; that the danger had been called to its attention; and that it should have, by police action or by erecting proper barriers or other action, taken effective means to keep the trucks off the runways and the City was held liable. This decision was by the California District Court of Appeals and was handed down November 17, 1938.

SEVERSON V. HANFORD TRI-STATE AIRLINES, INC.[13]

An interesting workmen's compensation case comes out of our

12. 29 Cal. App. (2d) 286, 84 Pac. (2d) 166 (November 17, 1938). See digest 10 J. of Air Law 433 (July, 1939).
13. 105 F. (2d) 622 (C. C. A. 8th—July 19, 1939).

own Eighth Circuit Court of Appeals. One Severson had been employed by the Hanford Tri-State Airlines in Iowa. The terms of his compensation and the extent of his duties were agreed upon in that state. He came out immediately to Minnesota as a traffic representative of the airlines. He then became a co-pilot and was injured while on a flight from St. Paul to Chicago, the accident occurring in Wisconsin. It was quite evident that Severson's attorneys desired to recover under the common law rather than under the Workmen's Compensation Law, and suit was, therefore, filed in the State Court and subsequently removed on the grounds of diversity of citizenship to the Federal Court, and there the defense was made that this injury was compensable under the Workmen's Compensation Law and that a common law action could not be maintained. It was the position of Mr. Severson and his attorneys that the employment had taken place in Iowa; that the Hanford Lines had never complied with the Iowa Compensation Law and that, therefore, he, Severson, was free to bring his common law suit. The Court held that the business of the defendant company, as well as the duties of the plaintiff, were both localized in Minnesota. The plaintiff had never performed any of his duties in Iowa, but had performed them all in Minnesota and hence the Minnesota Compensation Law applied and all plaintiff could recover was those payments provided for by that Compensation Law.

AMERICAN AIRWAYS, INC. v. AETNA CAS. CO. & FORD MOTOR CO.[14]

You will recall my telling you that the Manitoba Court held that the company was not liable for a defect in the propeller blade, which could not be discovered by ordinary inspection.

We have an interesting propeller case which comes from New York, decided by the Supreme Court for New York County on February 2, 1939. The American Airways owned a Ford Tri-Motor which they sent to the Ford Company to be reconditioned, instructing the Ford Company to make a thorough inspection of the plane in all parts and to advise the American Airways of everything which needed to be done to thoroughly recondition the plane. The Ford Company made its recommendations and the American Airways ordered all the work to be done. The reconditioning was completed on May 31 and on August 31 the plane crashed, with the result that the American Airways suffered a property damage of $30,000.00 and the Aetna Casualty Co., its insurer, paid casualty claims amounting to $60,000.00. It was discovered that the cause of the crash, which occurred two miles out of Cincinnati, was the breaking of a propeller blade at the hub. A tool mark was visible. It was barely visible to

14. 235 C. C. H. Aviation Law Service, par. 912 (N. Y. Sup. Ct.—February 2, 1939); see comment 10 J. of Air Law 414 (July, 1939).

the naked eye, but clearly visible to a microscopic study. The evidence showed that a tool mark has a tendency to weaken a propeller blade and, in fact, that was the subject of a factory memorandum circulated among the Ford engineers in 1930.

The Court held that the failure to make such an examination as would discover the tool mark and the failure to do what was necessary to correct it, in view of the Ford Motor Company's knowledge of the subject, was a breach of its contract, and held the Ford Company liable for the $90,000.00 paid out by the American Airways and its insurer.

STATE OF MO. EX REL MUTUAL LIFE INSURANCE CO. OF N. Y. v. SHAIN[15]

The final case to which I want to call your attention is a decision by our Missouri Supreme Court, an insurance case, decided February 22, 1939, being *Shain* v. *Mutual Life Ins. Co.* A young lady in Kansas City, employed as a physician's assistant, took out a life insurance policy for $1,000.00. The policy provided for double indemnity in case of accidental death—in other words for $2,000.00—but provided that the accidental provision should not cover anyone while operating or riding in any kind of aircraft, while as a passenger or otherwise, except as a fare-paying passenger in a licensed passenger aircraft. Further down in another part of the policy, it was provided that "this policy is free from restrictions as to occupation."

The young lady, after taking out this policy, took a course in trained nursing, became a trained nurse, and in time became a stewardess on an airplane. The plane crashed and she was killed. Her family claimed that they were entitled to the $2,000.00 instead of the $1,000.00 because the provision that the policy was free from restriction as to occupation permitted her to become an airplane stewardess, and that that provision overrode the provisions as to liability.

The Kansas City Court of Appeals agreed with this contention, but the Supreme Court of Missouri held that the provision limiting liability was too clear for any dispute as to its meaning and that the permission to engage in any occupation pertained to the life insurance portion of the policy, and did not change the meaning of the double indemnity accidental feature. I, therefore, point out to you that you cannot, while you are working at a desk job, take out life insurance, then become a transport pilot, and expect the accident provisions of your life insurance policy to remain in effect.

15. Supreme Court of Missouri Div. 2, decided February 21, 1939, 235 C. C. H. Aviation Law Service, par. 528. See comment on this subject 10 J. of Air Law 421 (July, 1939).

The Civil Aeronautics Act of 1938

This Act was discussed somewhat by me in my 1938 report. At that time, there was only the bare Act to discuss. We knew none of its workings, none of its problems. We are all aware of the fact that engineers can plan and build a beautiful machine on paper; that model builders can build one of these machines from the plans and make it work; but we also know that when a new machine of this type is put into production and put into the hands of the public, "bugs" are discovered which take time and patience to work out.

It might be well to point out some of the problems that were not known to exist at the time the Act was passed, but which, in practice, have presented some "bugs".

Among other things, the Civil Aeronautics Act provides that an air carrier may make charter trips or perform any other special service, without regards to the points named in its certificate, under such regulations as may be prescribed by the Authority.

In another paragraph it is provided that an air carrier must file tariffs showing all rates, fares, and charges. These tariffs must be filed, posted, published and maintained and no other change may be made other than those in the tariffs.

The question arises, first, can an air carrier conduct a charter trip without first having filed a tariff, and the question also arises whether the Authority can require the carrier to file a tariff for charter trips when it is not between points served by the carrier, and finally, how can a carrier possibly file tariffs covering all charter trips in view of the thousands of different places to which persons may wish to go and the thousands of different circumstances under which they may wish to go, and the different equipments which they may wish to use. As yet, the Civil Aeronautics Authority has not made any regulations with respect to filing tariffs for charter trips. This is one of the bugs in the Act which has not yet been worked out.

One of the hardest nuts to crack is presented by the labor legislation included in the Act. The Act requires the air carriers to maintain the rates of compensation, the maximum hours and other working conditions relative to pilots and co-pilots, so as to conform with Decision No. 83 of the National Labor Board of May 10, 1934. The National Labor Board went out of existence when the Wagner Act was passed in 1935 creating the National Labor Relations Board. The decision itself was to stay in effect only one year. Yet the Civil Aeronautics Act says that the decision must be complied with notwithstanding any limitation in the decision as to its period of effectiveness.

When one examines this decision, he finds that the hours are

limited to 85 hours per month. The regulations of the old Bureau of Air Commrece and of the present Authority limit the hours, from a safety standpoint, to 100 hours per month. The old decision did not say whether, after 85 hours, time and a half should be paid, or any other form of compensation. It simply set a limit. To that extent, it conflicts with the power of the Authority to make safety regulations and is inconsistent with its present regulation.

The old decision said that the differentials existing on October 1, 1933 for pilots and co-pilots flying over hazardous terrain shall be maintained. It has been since discovered that there were no known or fixed differentials between pilots and co-pilots on October 1, 1933. While there was a differential for pilots flying over a hazardous terrain, there was no differential for co-pilots. All this helps to make it easy.

The present National Labor Relations Board, which succeeded the old National Labor Board, has taken the position that it has no power to interpret this famous Decision No. 83.

But that is not all. This decision, you will note, fixes the rate of pay and the maximum hours. Apparently, the Civil Aeronautics Authority is called upon to enforce it by seeing to it that this decision is not violated by air carriers.

However, another section of the Civil Aeronautics Act requires that as a condition precedent to continued operation as an air carrier, the air carrier shall comply with Title II of the Railway Labor Act as amended. This is the Act of April 10, 1936, which made air carriers and their employees subject to the National Railroad Adjustment Board and gives either party to a dispute the right to appeal to the Board. Is the Civil Aeronautics Authority, therefore, authorized to enforce Decision 83, and if so, does not this deprive the carrier of his right to go to the National Railroad Adjustment Board? Assuming that the carrier does not comply with the Railway Labor Act, is the penalty found in that act or is the Civil Aeronautics Authority required to cancel the carrier's certificate? This is another bug which has not been fully dragged out to the light. When it is dragged out, will it be stepped on or just swatted?

The matter of schedules under Section 405(e) is at present very much up in the air. Each air carrier is required to file with the Authority and the Postmaster-General all schedules and all changes in schedules. Now the Postmaster-General is authorized to designate any of such schedules for the transportation of mail and may, by order, require the air carrier to establish additional schedules. The carrier cannot make any change in the schedules designated or ordered by the

Postmaster-General, except upon ten days' notice and the Postmaster-General may, by order, disapprove any such change or may alter, amend, or modify any such schedule or change; but on the other hand, any person aggrieved by the Postmaster-General in this respect may apply to the Authority within ten days for a review and the Authority may review the order and amend, revise, suspend or cancel the order of the Postmaster-General.

Again, just to make it complicated, it is provided that no air carrier shall transport mail in accordance with any schedule other than a schedule designated or ordered to be established for the transportation of mail.

Finally, may I call your attention to the fact that Section 401(f) provides that no term, condition or limitation of a certificate shall restrict the right of an air carrier to add to or change schedules as the development of business and the demands of the public shall require. Thus we have the air carrier with an apparently unlimited right to change schedules, the Postmaster-General with the authority to order new schedules and to change or amend a proposed change of schedules, and with the Authority having the right to review and make such orders as public convenience and necessity may require.

No application for the establishment of a new airline, except those made mandatory by the Act itself, has as yet been acted upon by the Civil Aeronautics Authority. Several hearings have been had and completed. The difficult, I take it, of handing down prompt decisions on these applications is inherent in the Act itself.

The Act provides that the Authority shall issue a certificate authorizing the transportation covered by the application, if it finds that the applicant is fit, willing and able to perform such transportation properly, and to conform to the provisions of the Act, and that such transportation is required "by the public convenience and necessity".

Most all of us know what is meant by "public convenience and necessity" as applied to railroads, power lines, and motor carriers. The simplest way of expressing public necessity in these instances is that where there is no railroad, or no truck line, or no power services, public necessity exists. It even exists where the present service is inadequate.

Obviously, it does not follow that the mere absence of air transportation conclusively shows the necessity for such transportation. If towns A and B, forty miles apart, have a population of 50,000 each and are not connected by a truck line, we can assume from those facts alone that a truck line is a public necessity. We cannot assume that an airline between two such towns is a public necessity. We cannot

even assume that two towns of 500,000 each, one thousand miles apart, without an airline, establishes the necessity of such a line. There would have to be shown that there were such business relations or community of interest between the two towns that air mail, air express, and air transportation would be used. But just what are the yardsticks by which the desire for air service can be measured? Does the fact that between two cities there is daily movement of package freight of a certain volume guarantee a daily use of air service of another certain volume? Do the telephone calls give any indication? Do the telegraph messages or the express shipments, or the railroad passengers? Do all of them together constitute an average yardstick by which the saleability of air service can be gauged?

This is one of the problems which is confronting the Civil Aeronautics Authority. I do not know whether this problem is capable of solution by yardstick or not. It seems a little difficult to assume that there is a fixed relationship between the demand for air service and the use of other business facilities. There probably is, but what the relationship is, or may be, is very much of a mystery.

However, the economic aspect of the problem, as complicated as it is, would probably be capable of simple solution were it not for the other factors which have been very properly and necessarily injected into the problem.

Under the Civil Aeronautics Act, the possible acceptance and use of air service to the extent that the airline would probably be profitable, or at least self-supporting, is not the sole criterion. Congress had more than the solvency of the air carriers, old and new, in mind. Congress was directed by Section 402 of the Act to consider as being in the public interest and in accordance with public convenience and necessity six different things, of which two are pertinent to our problem.

The first was the encouragement and development of an air transportation system, properly adapted to the present and future needs of the foreign commerce of the United States, of the postal service, and of the national defense. The second was the encouragement and development of civil aeronautics.

Let us consider first the word "encouragement", which is used twice, once for the encouragement of the system of air transportation, and once for the encouragement of civil aeronautics.

A system of air transportation which is to be "encouraged", as well as developed, clearly indicates that Congress did not mean that the present mileage, and the present mileage only, was to be flown. It clearly indicates that Congress intended that the system should be

increased, should be broadened, that more towns should be put on the airlines, that more and better connections should be made, and that more and more people should be offered the advantages of air transportation, which advantages are not only becoming more and more self-evident, but are becoming more and more accepted as a truth by the general public.

What is meant by the language "present and future needs" if an expansion of the present physical plant of air transportation was not contemplated by Congress?

Further, it is necessary to note that Congress evidently makes a distinction between commerce as such, and air mail. We presume that Congress, by the term "commerce" means "passengers and express", because we find that this system which is to be encouraged and developed is not only to be adapted to present and future needs of foreign and domestic *commerce*, but is also to be adapted to the present and future needs of the "postal service". This thought itself gives some wings to the imagination. It doesn't necessarily mean that every town in the United States should have an airport and that at each airport there is to be air mail service, but evidently it does envision a future where air transportation is adequate for the needs of the postal service. This would seem to indicate that Congress had in mind that as long as I live in Bingville I might not be able to travel on a plane, but I ought to be able to get my air mail letters into the big cities, and get my air mail letters back from the big cities, in the reasonable future.

Finally, we come to the present and future needs of the national defense. This language again seems to indicate that Congress did not feel that the national defense was adequately provided for, insofar as our present system of air transportation was concerned. And what is meant by a system of air transportation which is adequate for the national defense? Does it mean only such a system that could carry soldiers or ammunition from one point to another as needed, or does it mean that there shall be many commercial airports which are available for use by army planes? Or does it mean that by the development of factories which manufacture civil planes, we can create a reserve of manufacturers who can, if necessary, make military planes? Or does it mean that our system of air transportation should be such as to teach thousands of men to operate and maintain planes who, in an emergency, can be used to do the same for military planes?

And finally, we come to the second sentence to which I referred, and that is that there should be considered "as being in the public interest and in accordance with the public convenience and necessity",

the encouragement and development of civil aeronautics. You will note that this goes far beyond a system of transportation. It goes beyond the needs of the postal service. It goes far beyond the national defense. Civil aeronautics would certainly be broad enough to include the use of planes for all purposes by civilians, the building and development of planes adapted to general use, the support of airplane factories, etc.

Now having developed all these frothy bubbles of conjecture, it might be a good idea to throw away the "kicker" and draw three cards. But let's see if I can get back to the subject which I started to discuss, which is just what are the standards upon which Civil Aeronautics Authority shall base its decision as to the establishment of new airlines.

The first decision will be of the utmost importance. It should insofar as possible, lay down a guide to be followed by the Authority in subsequent applications. It should discourage unworthy and frivolous applications, but at the same time it should so encourage aviation as to offer practically an unlimited future to carriage by air.

It is unfortunate that Congress did not give us the standards to be followed, but in the very nature of things, Congress could not. To show my mental agility, I will say that it is exceedingly fortunate that Congress did not, because no Congress today, nor tomorrow, nor next week, could lay down any hard and fast rules, upon which such certificates could be granted or denied. One thing this industry does not need is hard and fast rules.

The first decision of the Civil Aeronautics Authority will go a long way towards encouraging, vitalizing, and enthusing those engaged in air transportation. It can, at the same time, go a long way towards discouraging. A fine judgment and balance is needed to steer aviation between the danger of over-booming it, on the one hand, and of failing to give it the encouragement that Congress clearly meant it should have, on the other.

In spite of the fact that I am, and have been all of my voting life, a staunch Republican, in spite of the fact that my predilections and judgments are contrary to most of the New Deal legislations and policies, quite apart from my appreciation of some of the splendid qualities of the President, I nevertheless feel that the Civil Aeronautics Act was, in the first place, a splendid piece of legislation, for what one might call the first attempt, and second, I feel that the personnel selected by the President is such that the industry should feel comforted, encouraged and enthusiastic.

There are, though, criticisms which I have heard. There is the

criticism that there is not the proper coordination with the State Aviation Officials. If this were something new, it would be distressing, but this criticism, to my certain knowledge has been present from the time of the formation of this Association until now.

This criticism was voiced when Bill MacCracken was the Assistant Secretary of Commerce for Air and when Clarence Young held the same job. It was voiced concerning Major Vidal, who was Chief of the Bureau of Air Commerce, and was not even silenced when our own Fred Fagg had the same position.

Also, in the nature of things, it probably never will be silenced, and probably never should be silenced. Here is a state official with a particular job to accomplish, a job which keeps him thinly spread over many aspects of aviation work, and here is a federal official with also a job to be performed. The two jobs are never quite the same. In certain aspects, they are identical; in certain others, they diverge. The state officials being closer to their problem, probably having a much longer experience, and probably having a much more practical experience, are naturally impatient that the federal government does not see with them eye to eye on those points where their problems are identical.

Criticism of the federal government official naturally follows, but I believe that the federal officials, if such criticism is of a friendly nature, and of a constructive nature, will appreciate that the desire of the state officials is only to elucidate the problem and to educate the federal official as to the backgrounds of the problem.

So far, I have seen no disposition on the part of the Civil Aeronautics Authority members themselves, and very little on the part of subordinates, to take the position that they knew it all. It might be that there are very few state officials who know it all. Sometimes, I am amazed to find that I don't.

I believe that there is now being put into effect, with every possibility of great success, a sound plan for the cooperation between the Civil Aeronautics Authority and the National Association of State Aviation Officials. This particular movement is under the general supervision of Dick Boutelle and under the particular supervision of Elwood Cole, both of whom are respected former members of our official family and both of whom are conversant with the peculiar problems, aims, desires and objectives of the State Officials. The fact that the coordination effort is under the charge of these two men is as encouraging, I believe, to State Officials as is the personnel of the entire Authority to aviation in general.

A policy of patience and cooperation will, I believe, work out

these bugs. In any event, the Civil Aeronautics Act is the Magna Charta of aviation. With some defects and some uncertainties, it is nevertheless the finest thing that has happened to aviation since the World War conclusively proved its practicality.

I hope that this Association will lend the great weight of its influence to assisting in an effective and helpful interpretation and administration of the Act, and effective and helpful amendments where needed.

This isn't the first time that I have taken advantage of this opportunity to do some preaching. I think it is now time to take up the collection. I thank you.

FEEDER AIR ROUTES

By

B. E. Cole*

Before I read my prepared speech, I would like to read President Morris' comments on feeder service which he did not give us at the luncheon yesterday.

"This Association has gone on record in favor of the development and establishment of so-called "feeder" airlines, thus recognizing the fact that the present established air routes directly serve only a little over one-quarter of the nation's population (often with unsatisfactory and infrequent schedules), and that of the 4,000 cities in the United States with over 5,000 inhabitants, there are only 210 cities, or about five per cent, on the airlines.

"Concentrated effort toward accomplishment of the purposes of this resolution was withheld, pending the Civil Aeronautics Authority's decision on the application of Airline Feeder System, Inc., for a certificate of convenience and necessity. The decision was made on June 9, 1939, and the request for the certificate was denied.

"At first blush, this seemed a very poor commentary on the attitude of the Civil Aeronautics Authority toward feeder developments. Here was a small line that had struggled to get a footing under the old Bureau of Air Commerce—it had operated without benefit of air mail and had been required to run a scheduled service at a heavy financial loss in order to be qualified to file an application under the so-called "Grandfather Clause." After all this, the application to be allowed to continue operations had been rejected on grounds that the line had not rendered adequate and efficient service, having carried relatively few passengers during its existence, having run only one scheduled trip per week during the latter part of its life in accordance with permission granted by the Civil Aeronautics Authority and having been forced into bankruptcy.

"This decision might seem to promise a black future for the development of supplementary air transportation services; but careful study does not justify this conclusion, at least to date, because it must be realized that Airline Feeder's application could not be decided on the general ground of a need for the service. It had to

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be decided on the specific considerations required under the grandfather clause; namely, (1) that the airline had been "an air carrier, continuously operating as such" from May 14, 1938; and (2) that the service rendered for such period had been *efficient and adequate*. The admitted facts in the case could not support these latter requirements, and the application therefore had to be rejected.

"It is important to realize, however, that this does not, of itself, indicate the Authority's position as regards feeder services. The decision that will demonstrate whether or not the present Act, and the present administration of it, will permit the expansion of transport services by means of feeder lines, is rolling through the millwheels at this moment, dealing with the application of this same company (Airline Feeder System) to establish a *new* feeder service.

"It is generally admitted that the present Civil Aeronautics Act encourages the creation of such services and that it is adequate as it now stands. The point that still remains to be demonstarted is whether or not the *administration* of the Act will be such as to permit this most necessary expansion. The Authority's action on the application now pending will furnish the answer.

"It may appear from the foregoing that too much emphasis has been laid on federal matters. However, state problems in aviation are so closely interwoven with the problems, decisions and acts of the federal government that we must at no time fail to recognize the actual or potential influence of the national aviation program on us. Our duties in the states begin where the federal jurisdiction ends, whether that ending be caused by constitutional limitations or by the limitations of personnel and appropriations. It is for this reason that the foregoing remarks on federal aspects have required substantial treatment."

To this, I add the following comments:

When I received your President's invitation to speak on the subject of feeder routes, I worked up a comprehensive talk on them which bristled with statistics, and I hope conclusively proved that the routes were practical and necessary. You won't have to listen to this, as I threw it out when I learned that you have already gone on record as being in favor of feeder routes.

A detailed review on what feeder lines ought to be, where they should go, what equipment should be used and how they should be operated, will not do much toward getting some self-sustaining lines going. When we have solved that question, we can go into these details and consider who is to run these routes and what deviations from primary airline practice should be permitted or required.

All I am going to say about feeder air routes is just enough to define my interpretation of feeder service. The rest of my time will be spent on what I think the members of this Association can do to carry out their resolution to foster it.

As I understand the term, there have been no true feeder routes yet. A few runs in the present primary ssytem should perhaps be feeder routes, but they are being operated as primary lines under primary airline regulation. These have been short lines carrying passengers without mail, there are others carrying mail without passengers, but there has not been a feeder line using equipment suited to small airports, operating under regulations adapted to its class of service and carrying mail, passengers, and express.

I believe that there is a basic difference between primary and feeder service which goes deeper than this commonly accepted definition. The primary airline's business is built around the service it provides within its own routes, and particularly between the large cities thereon. Connections with other airlines and services to its own intermediate stations are and always will be secondary considerations.

On the other hand, the feeder will get but a small percentage of its business from travel wholly within its own route; therefore, connections are the basis of feeder routes and of the schedules which will be established on them.

Service for intermediate stations, rather than between termini is the first consideration, and this fact makes the problem of proper route location extremely important. This was very simple with the primary routes, since they were instituted to link our larger cities, and intermediate stops were made at points which happened to lie on the route. Service into these intermediate points has been secondary to that between the large cities.

Building a service for the intermediate station must be planned the other way around. First you consider that station; second you decide to what large cities and junction points it should be linked. Your feeder route isn't planned to serve large cities—that is the job for the primary routes. What the feeder must do is give the smaller cities fast transportation to every point in the country. That means a lot more than fast airplanes. It means convenient schedules and good connections with as many other lines as possible.

The operator of such a route can't figure on much business between his own stations, for the automobile will make better door to door time on distances of around one hundred miles, in nearly every case. But if his route is intelligently laid out, it will have an outlet at both ends and possibly at other points along the line so

that at each station he will have a balance of outgoing and incoming traffic.

With these thoughts in mind, a tentative national route system was laid out some time ago. The 906 additional airway stations on it will serve 70,000,000 additional people. Less than 45,000,000 have air service in this country today.

You may have noted that I said fast transportation, not air service. Not all of these 70,000,000 live in the towns at which the airway stations are proposed, but all of them do live within an hour's drive of them. Bus routes extending from airway stations to points within this one hour radius will provide just as direct an air service as that of Chicago or St. Louis, and such surface transportation should be considered a part of any feeder service. The average at each of the projected airway stations, including those within the one hour driving radius, is 77,000 persons. This does not include any large cities now having air service.

I have split up this tentative feeder system into routes, and it should be clearly understood that there is a difference between an air route and an airline. The length of a route is the distance an airplane can cover, make its connections, and give good service to its intermediate stations. It may be economical for one feeder line to operate several feeder routes, but the minute that line starts basing its schedules on through service, it encroaches on the primary field. If there is need for through service, by all means start a primary route for it, but don't try to combine the two types, for if you do it's back to the dog house for the intermediate towns.

Feeder routes should be as long as you can make them; short lines cannot be self sustaining unless there is demand enough to support a number of trips each day. An excellent instance is the Post Office proposal for air mail between Bismarck and Minot, North Dakota, a distance of 106 miles, made some two years ago. No one has taken it up yet. You can't provide first class equipment and operate it properly on an hour and a half of flying a day. It would be a losing proposition even if you received a dollar a mile for the mail.

Comprehensive advance planning will eliminate such short tag end routes. Without it there will be a lot left over which no one wants to operate and on which it would be impossible to give good service if they were tacked on to other lines.

I think we must accept the premise that at the start feeder routes will be daylight operated in contact weather.

I do not subscribe to Mr. Hester's statements in his "Progress Valley" speech at Kansas City last fall. His contention seemed to

be that if feeder routes were to have any practical value they would have to be operated at night, and that if they were to be so operated, there would have to be radio ranges and lighted airways. If night flying were unrestricted, over eighty per cent of all feeder route flying would be by day if the feeder is going to provide the connecting service that its very name implies.

Let's say we have one running northwest from here (New Orleans) and that Progress Valley is on it. If we are going to provide

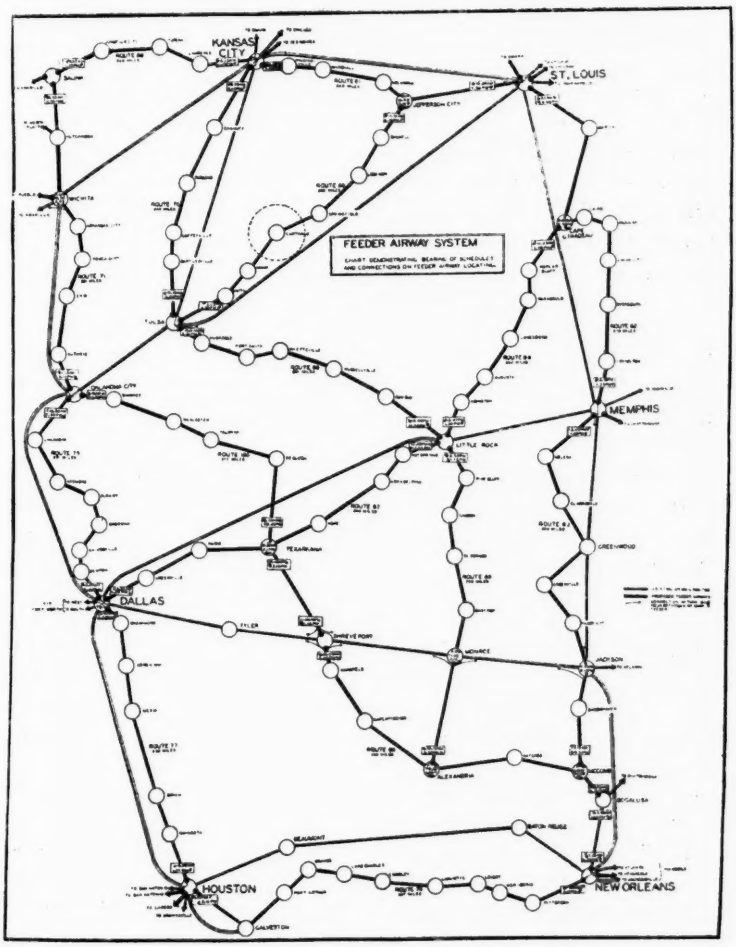

Figure 1

any connecting service at all, we can't leave here until the New York and Chicago planes are in, and we must get back before they leave that evening. In summer, that means no night flying; in winter, we can avoid it by stepping up our afternoon schedule about an hour.

These are not mythical instances. I have a chart here (Figure 1) with possible routes in this area, and the time schedules on this chart are what can be done with planes now available.

Intentional instrument flying as practiced today is not practical for feeder routes. Ranges in existence are adequate for emergency conditions, and in nearly every case will be found at the termini of any properly located route. If ranges were provided, the time required for an instrument approach to each station would make the teminus to terminus speed about equal to that of an ox cart at a slow walk. Probably it won't be many years before we have a blind landing system which will make such landings as simple as driving down a concrete road in broad daylight, but until then, added ranges would not be an asset to an average feeder route.

There has been much discussion on equipment. I believe planes of from four to eight passenger capacity will be preferable to larger types for some time to come. Their higher pound-mile cost will be off-set by partial load savings and the undisputed value of frequent service. Two or three trips a day with a small plane can be made at about the same cost as one trip with planes of from fourteen to twenty-eight passenger capacity.

Whatever the design or size, I am convinced of one thing: that is that any feeder plane should comfortably carry full loads out of any Class 2 airport under any wind or temperature conditions, and in emergency should take this load out of any Class 1 field. It should not require a prima donna for a pilot. It should be free from gadgets requiring a co-pilot. Several makes of twin-motored planes are, or shortly will be, on the market which will meet these specifications and cruise at 160 miles per hour or better. Such planes could be efficiently operated and meet expenses and existing air express rates. On our tentative system, mail would cost $7.53 per stop; and if for each station one person out of every 1226 received and sent a letter, the mail revenue would equal this sum. I differ with the optimists who think that feeder routes are going to generate this amount of mail. Primary lines are just about to a point where gross air mail revenue almost equals the amount paid them for hauling it, after twelve years of development. It will take the feeder just as long, and perhaps longer; some of them may never earn all they are paid. That is subsidy, and feeder lines will need it. You're not kidding any one

who has had the slightest insight into air mail volume when you try to prove they won't.

Those who regard this as just another raid on the treasury should read a little history. Every improvement in scheduled transportation this country has ever had has been made possible by government support, usually through the post office department. Railroad and steamship service got their start this way. A hundred years ago railroads were being pushed out into the plains when there wasn't an inhabitant to five miles of track. No formulae based on population, postal receipts, trading centers and so forth justified these extensions. Foresight alone warranted the support our government gave them.

Our national development is unprecedented in the world's history, not only because we are rich in natural resources and because we have a democratic form of government, but more than any one thing we have become a great nation because our government, up to now, has always supported extension of scheduled transportation, not just in our lush and easy years, but in the hardest times.

One of the most critical periods in the history of our nation's finances occurred just a hundred years ago when there was a panic that makes our depression look like a pink tea. Banks were failing right and left, unsuccessful cure-alls were being tried in our Treasury Department, desperate measures were being taken to safeguard private capital. Certainly, if there was ever a time to question the propriety of subsidy, that was the moment for it.

Let's see what Congress did. In 1839 they authorized the Postmaster General to pay "up to $300 a mile for transporting railway mail," and in 1840 he reported to Congress that he had paid "amounts varying from twenty-five per cent to three hundred per cent above that which had been paid for stagecoach service over the same routes." That is what our forefathers did to double the speed of transportation in the midst of one of the most trying times in our financial history.

One hundred years later we find ourselves with a new transportation medium, one which will treble the speed of existing service, and, as has always been the case, this new service needs aid to get it on its feet. Private capital alone can't undertake it. This time we don't ask for many dollars a mile; we ask for a few cents. In the light of history, denial of this aid is an admission that we are done with progress, and I don't think that Congress wants to go on record to that effect.

As many of you know, feeder routes can best be operated with the present fixed base operator as a nucleus, supervised by central management and provided with planes and major servicing. I don't

believe that this is the time to discuss that plan, nor is it the time to discuss whether existing airlines or new ones should operate the lines on these feeder routes. Since they will be supported by public money, the people who use these lines should have the say about what routes are to be established and what kind of service they want over them. No star chamber proceedings behind closed doors will insure either the best or most efficient service, no matter how conscientiously they are conducted. It can only be done by finding out what the public needs and wants and then coordinate that demand.

No group of men in the United States is better fitted to bring about this coordination than the group comprising the National Association of State Avitation officials. You men know the states in which you live. You know the people in them. You know where air service is most needed in your respective states and you have aviation knowledge.

While most of the routes will perhaps be interstate, the first thing needed is a list of the points in each state which should have air service, where airports should be and what surface connections are needed from each station to adjacent towns; also the junction points which each air station community would like to have on its route.

This data can be collected by state officials and from it a coordinating bureau can map interstate routes. Naturally, there must be compromises, but I think you will be agreeably surprised at how many places will get exactly what they want in the way of air service. Probably many of you could give this data right now. Intensive work could have it all in hand within a few weeks.

Meanwhile, a bill should be prepared for presentation to Congress, carrying an appropriation for air mail and providing for the establishment of experimental feeder routes. In it there should be suitable provisions to insure getting the kind of service your citizens want and to insure fair and impartial consideration of methods for providing that service. It should avoid provisions which might benefit one state more than another. The patronage system will probably still be doing business when our unified demands have brought concrete results. Once the ball gets rolling, all states can expect to have service within a few years, and premature attempts to influence route location will only generate needless opposition elsewhere.

Some will question why I should recommend a bill when there is now a bureaucratic set-up which can bring all this about without one. Among the many reasons I have for this, perhaps the most important is the record of what has been done to date and how it was

accomplished. The only air mail pay I know of outside of that paid to primary lines was obtained by a bill introduced in Congress at the instigation of Dr. Lytle Adams, which carried an appropriation and specified certain operating requirements. You may or may not like his system of picking up mail, but that is beside the point. The point is that by specifically providing in a bill just what was to be done, money was appropriated to support a type of air service and that service is operating now.

You all know the history of feeder mail to date, how we have had many demonstrations at private expense, how literally hundreds of towns and cities have individually presented their case for air service to either the postal or aeronautic departments of our government. You all know that nothing has been done. So far as I know, nothing is contemplated in the near future.

As your President pointed out very ably yesterday, "A Federal Agency can only recommend—Congress is the voice of the people." Without a bill expressing this voice before the body can act on it, feeder route development apparently depends on what the boys in the back room decide to do about it when they find time to consider the question.

We have had good suggestions before other conventions with reference to feeder routes. They have come to nothing because they have not been backed by money or effort on the comprehensive scale that is needed to bring results. All the resolutions you pass from now till doomsday won't do any better unless their good intent is followed by efficient action. You will need a central bureau to coordinate and unify the mass of feeder route data you will gather, a bureau charged with the efficient presentation of your wishes. This work will cost money. The industry will provide some of it, but I don't think they can or should be expected to contribute very heavily.

With a feeder route bill providing for fair and impartial certification, no one in the industry is going to have any assurance that he will directly profit by feeder route operation; no manufacturer can be sure his planes will be used. There is, however, one group of people who know that they will benefit, and that is all those who want air service and will use it.

A modest contribution from each member of the chamber of commerce or of the business clubs in all the towns that want air service would provide funds sufficient to carry the work through and to turn all this talk into conclusive action. Less than one mill per person in the air service area of the proposed feeder route system would be adequate. It would pay for the preparation of charts mapping the

routes, each airport and its surface connecting routes, together with data on costs, schedules, and so forth, arranged specifically for each congressional district so that each Congresman would have before him just what his constituents wanted. It would pay for a bureau in Washington to disseminate information before the bill was acted on and to see that the case for each community received fair and impartial consideration after it was passed.

Your sponsorship would bring in the necessary contributions to start this work. Under your direction such a bureau could be kept active and well informed. The combined and coordinated voice it represented would be heard and heeded.

There you have my suggestions on what you gentlemen can do right now to get action on feeder routes. Prompt action should get concrete results before Congress adjourns, and will make it possible to have feeder lines operating before your next annual convention. Your citizens are either going to say, through you, where and when they want air service and what it shall be, or, without your coordinating action, they will wait until federal agencies decide what they should have. I believe the choice rests with you.

FEDERAL AID FOR CIVIL AERONAUTICS

By HARLLEE BRANCH*

When I was a little boy and came running in to supper from a hard afternoon of play the savory kitchen odors always made me wonder whether it might be pie, and then at supper when my mother presented us with a luscious cream pie my chief concern was how big a piece I would get. So I know how you feel about Federal aid. I think it is a natural curiosity which causes State officials to ask whether the Federal Government will aid them in projects which are largely local, and, if so, to what extent.

The question as to whether the Federal Government is going to spend money on civil aeronautics is, of course, already answered. The Federal Government has been spending money on civil aeronautics since 1918 when it first began, through the Post Office Department, spending money on an experimental airmail system.

From that modest and historic beginning the Federal Government has assumed heavy obligations for the inauguration and maintenance of an adequate domestic and international airmail and air transportation system and for the general development of civil aviation.

Government support of the airmail system, including domestic and international services, has grown to the point where, even deducting the amounts received from airmail postage revenues, the Government's payments for the carriage of airmail during the past twenty years totals approximately $150,000,000.

The early steps in furnishing a few beacon lights at emergency landing fields for the experimental air mail service have resulted in the present extensive Federal airways system. To safeguard air transportation the airways in this system are equipped with revolving beacon lights, radio ranges which project courses over the route flown, teletype circuits, continuous weather reports, intermediate landing fields, and other air navigation aids. To date the Federal Government has expended for these aids approximately $78,000,000.

Since 1927 the Federal Government has borne the cost of inspecting and certificating all aircraft manufactured in this country and the cost of inspecting, certificating, supervising and regulating

* Vice-Chairman, Civil Aeronautics Authority.

all types of civil flying. It is estimated that $11,000,000 have been expended for such services.

During the past five years the Government has spent more than $170,000,000 on airport projects in connection with its relief program. All of these expenditures by the Federal Government are independent of the amounts expended by the Government for military aviation purposes.

At its last regular session the Congress appropriated $4,000,000 for a Civilian Pilot Training Program and more than four hundred colleges and universities throughout the country have been selected to provide the courses of study and training called for by this program.

While this program is an expansion of vocational education and training and in nowise a subsidy, nevertheless it is an expenditure of Federal funds to encourage and develop civil aviation. I might say in passing that it is my opinion that this program will do more to encourage and develop civil aviation than any program yet offered.

The Federal aid for civil aeronautics over the period of the last twenty years has totalled over $400,000,000 or an average annual expenditure of more than $20,000,000. Such sums can hardly be called excessive when viewed in the light of the results obtained or from the standpoint of the value of civil aviation to this country.

Therefore, there is little meaning to the question "Is the Federal Government going to spend money on civil aeronautics?" A more appropriate inquiry would be "At what rate is the Government going to continue to spend money on civil aeronautics?" It is my opinion that there is no present prospect that the Federal Government can hope to avoid maintaining and even increasing the present rate. So important has air transportation become to the national economy; so important are our airports; our airmen and our airplane factories to the national defense; and so great is the industrial promise of private flying, that no one would even venture to suggest that the Federal Government should discontinue its policy of supporting civil aeronautics.

Aviation is a costly but necessary enterprise. Every nation has come to this realization and all the major nations of the world are appropriating vast sums for civil as well as military aviation.

The manufacturing branches of the aviation industry are now not only self-supporting but in numerous instances are making a substantial profit. There are indications that the domestic air transport operations may soon be largely self-supporting. Although the Civil Aeronautics Authority has granted increases in the rates of

mail pay to a number of airlines, reliable statistics indicate that the cost of this rapidly-increasing service to the Post Office Department may soon be equalled by the constantly increasing income received by the Government from airmail postage. The international air transportation ledger is not yet in such a satisfactory financial balance, but the current volume of international airmail is almost double that of a year ago. Overseas operations are much more costly than the domestic overland operations, and up to this time the postage income received by the Government represents only 31.80% of the total mail payments for the international services rendered during the last eleven years.

The cost of maintaining the Federal airways and the cost to the Government of the certification, inspection, and regulation of aircraft, airmen, and air transportation companies necessarily will increase as these air activities expand. These functions of the Authority are essential to safety in aviation and safety must continue to be the watchword for the Authority and for all branches of the aviation industry.

Another item in the air transport picture which has implications of increased Federal expenditures is the demand for the extension of the present airline network. At present there are more than eighty applications for certificates for new routes on the docket of the Authority and many of these petitions are from new companies. The Authority is faced with very grave responsibilities in passing upon these applications. It must be careful not to authorize new routes which cannot be justified on the basis of the value of the services which they will perform. It must avoid placing upon the public treasury the heavy financial burdens incident to the permanent operation of airlines which have no prospect of ever becoming self-sustaining and which at best can expect but a nominal mail and passenger traffic. It must assure itself that the proposed new routes will fit into an economically integrated national air transportation system.

An important factor to be considered in connection with new airlines is that under existing law the Federal Government provides through mail pay a very substantial portion of the revenues of such lines. It would be unfortunate, indeed, if the Authority were to permit airlines to spring up like mushrooms all over the country with no greater justification than that those promoting them will establish for themselves a remunerative business which largely would be financed and supported in perpetuity by the Federal Government. Any one who is familiar with the disastrous consequences which resulted

from haphazard railroad promotions, thirty, forty, and fifty years ago, or with the more recent uneconomic planless development of power utilities in many areas of the country, will appreciate the gravity of this question.

In still another field of aviation the Federal Government has assumed financial obligations; namely, private flying. The entire time and attention of one of the divisions of the Authority is devoted to the interests of private flyers and much of the work of the inspection force of the Authority is given over to the examination and certification of private flyers and the inspection of the aircraft they fly.

There are at present approximately 27,000 certificated civilian pilots and it is estimated that by the end of 1941, largely as a result of the stimulus provided by the Civilian Pilot Training Program, this number will be increased to more than 75,000.

I know you are all interested in the aeronautical activities I have just mentioned, but undoubtedly at this time you are more interested in the development of airports. Every one must agree that such activities are of little value if we do not have adequate airports. Yet on the other hand without these other activities there would be little need for airports. Consequently, all phases of aeronautical development must move forward together.

Some spokesmen for municipal and civil aviation organizations recently have been quite critical of the Authority because it did not in some way induce the last Congress to appropriate and make immediately available millions of dollars for airport construction. While the Civil Aeronautics Authority has no desire to shirk any of its responsibilities, it must be remembered that the Authority is an independent agency of Congress whose powers and functions are fixed by law. The Civil Aeronautics Act definitely imposes upon the Authority the duty of advising Congress upon aeronautical matters, at the same time prescribing the procedure by which that advice shall be given. It is not the proper role of the Authority to draft bills and lobby them through Congress, no matter how desirable such legislation might appear to the Authority or to any other person interested in aviation. The Authority legally cannot and morally should not constitute itself a high-pressure agency for influencing the Members of Congress. However, it can and should advise the Congress in the manner prescribed and sanctioned by law as to what legislation in its opinion is necessary to the sound development of civil aviation. And it has done just that in the matter of airports.

The Civil Aeronautics Act which created the Authority required it to make a national airport survey and recommend to the Congress

(1) whether the Federal Government should participate in the construction, improvement, development, operation, or maintenance of a national system of airports, and (2) if Federal participation is recommended, the extent to which, and the manner in which the Federal Government shall so participate. The Authority made such a survey and in its report to Congress last February made such recommendations.

To be specific, the Authority advised Congress that in its opinion the Federal Government should participate in the construction of airports, particularly those airports which are vital to the Federal system of airways and to the national defense. The Authority's report said: "In passing upon applications for Federal expenditure on airport development or improvement, the highest preference should be given to airports which are important to the maintenance of safe and efficient operation of air transportation along the major trade routes of the Nation; and to those rendering special service to the national defense." The Authority pointed out in its report that during the year ahead a total sum of $125,000,000 could be efficiently used for these purposes.

At the time the Authority made its national airport survey and its report to Congress the Federal Government was appropriating large sums for relief and had for several years devoted a sizeable portion of these funds to airport construction. With the relief problem still acute and the apparent certainty that Congress would for some time continue to provide appropriations for relief, the Authority thought that it would be wise specifically to allocate a certain percentage of the relief funds for airport construction, and it recommended an allocation of $100,000,000 of the 1940 relief appropriation for airports. In addition it recommended that a supplemental appropriation of $25,000,000 be appropriated for those airport construction projects which could not be provided for from relief funds because of the limitation specified in the relief appropriation act on the ratio of expenditures for labor and for materials, thereby providing funds for those airport construction projects which call for a larger percentage of the allocated funds for material and a lesser proportion for labor.

The Authority made it quite clear in its report to Congress that when the relief appropriations were reduced to a point where it would no longer be practicable to construct airports with relief labor the Government should, through special appropriations, make provisions for such necessary construction. The Authority did not at the time it sent its recommendations to Congress and does not now hold

to the opinion that the Federal Government should assume the full burden of airport construction. It feels that this burden should be reasonably shared by the municipal, county, and state governments.

We do not believe that there can be any uniform and universally applicable rule covering the division of costs among the various units of government. Some airports exist primarily in the interest of the locality; others are of regional or of national importance. It is hardly possible to imagine an airport so placed that it would not be useful to somebody; but that does not mean that every conceivable location becomes a matter of national importance, and of proper Federal concern. There are an indefinite variety of cases, and it has seemed to the Authority indispensable that there be a corresponding flexibility of procedure, and that there should be some discretion as to the extent of Federal participation in order that it may be directly related to the circumstances of the particular case. We have so expressed ourselves in our airport report; but we may have erred in not making that part of our recommendations emphatic enough, since it seems to have been very commonly overlooked in the subsequent discussions of the Authority's proposals. A discretionary role is not an easy one to occupy, and a flexible rule is not an easy one to administer. It would be far simpler from the point of view of Federal Authority to have some such uniform rule as that the Federal Government will bear a fixed proportion of the total cost of every airport project that meets a certain minimum standard of acceptability; but we do not think that a uniform rule, despite its simplicity, would give the best results that can be obtained from a given amount of money.

We are justly proud of the advanced development of civil aviation in this country; that we have more privately-owned aircraft and civilian pilots than any other nation; that our air transport companies fly more miles and carry more passengers with an unequalled record of safety; that we have more and larger and better airports serving an aviation-minded public; and that our aircraft manufacturers produce the best and latest in civil aircraft. All of this has been made possible by the continued cooperation of the states, municipalities, the industry, and the Federal Government. There is no problem confronting us today which cannot be answered if we have the unified support of all who are interested in aviation. The Authority hopes for the continued cooperation and the sustained help of these same agencies and groups. With it, the limitlessness of the airspace is our only barrier.

AVIATION'S NEWCOMER—THE EAGER CUSTOMER

By Clinton M. Hester*

A year ago I had the pleasure of meeting many of you for the first time, at your convention in Omaha. On that occasion the Civil Aeronautics Authority, but two months old, was confronting the world of aviation just about the way any two-months-old would confront any world. It looked like a very big world. And our task in it looked like a very complicated one.

But I believe I was able to offer you some promise. I was able to remind you that our infant organization was bred along sound lines — and that you yourselves were among its progenitors. I read from the constitution of the National Association of State Aviation Officials, and then from the declaration of policy in the Civil Aeronautics Act of 1938. The family likeness was inescapable. I was able further to advise you anxious fathers that the infant was by all the signs a healthy, intelligent weanling already showing a commendable determination to tackle the problems of its world, however complicated they might seem.

Your then generous promise of aid has since been made good. Where needful, during this year, you came forward with criticism well justified by the motto "Spare the rod and spoil the child." But, even through that criticism, we have been conscious on our side that you were seeking the same ends that we were — the great ends of developing a civil aviation establishment suitable to the needs of the United States.

On that, I think I have a message to give to you. I should hesitate to claim any angelic prerogatives. But I do think that I have for you, for all of you who have labored so long, and often without recognition or reward at aviation's tasks, what constitutes nothing less than good tidings.

A new figure has come into civil aeronautics. He is so new and so startling, I am afraid, that some of the weary veterans may be a little puzzled or more than a little alarmed. They may even be tempted to slam the door in the newcomer's face.

Gentlemen, don't let anyone do that! There can be no doubt

* Administrator of the Civil Aeronautics Authority.

that this newcomer brings to civil aviation the most important thing since the internal combustion motor. For, if the internal combustion motor put the airplane in the air, this year's innovation will put it into a solidly earned place in our national economic life.

Gentlemen, the newcomer to civil aeronautics is none other than that funny little man who solves so many other ills — the eager customer!

Take the scheduled airlines. For years their problem has been to attract passengers. Today their problem is to find planes, and the pilots to fly them, for the eager passengers and the ever increasing number of mail sacks and express shipments that seek to be carried in their comfortable cabins and their ample holds.

This is despite the fact that they have not only increased their service in intensity but have spread it more than half round the globe. With pardonable pride, I can testify personally to this change. Since assuming my office I have flown most of our domestic air lines in the United States and our foreign lines, to London on the one hand, and, on the other hand to Hawaii and on over the proposed route to the South Seas and New Zealand. And right here I might say that my experience is first of all a testimony to the speed and convenience of this new mode of transportation. But a few years ago these journeys would have taken months. I was able to accomplish them by air, under the American flag, with very few days lost from a very busy desk in Washington. And, speaking of the American flag, if it still be true, as I hope it is, that the sun never sets on the British Empire, it will very soon also be true that the American flag, carried by American planes, gives that old sun a very good race of it from the heart of the British Empire in London to its farthest outpost in "the land down under," and that every day and night in the western hemisphere these planes carry the flag athwart the sun's path from Nome in Alaska to Buenos Aires in the Argentine.

That, of course, arouses our national pride. But the reason for those flights, the reason for the huge increases in schedules on the domestic lines, is not the mere gratification of a pride, however proper. It is the more prosaic but actually more important one of supplying a demand for a service which shrewd American business sense buys because it pays in time saved, in comfort earned and in business done. That is our customer at the airline's door.

And he's there in startling numbers. The winter trough for 1939-1940 will in all probability look like the summer hump for previous years. For the first six months of 1939 the airline industry as a whole is in the black at least a half million dollars, whereas six-

teen months ago many of the lines were on the verge of bankruptcy; and for the summer months every individual airline made a profit, a situation that never existed before in all the history of air transportation.

Early this year we were predicting that the airlines of the United States would carry a million and three-quarters passengers this year. It now seems that there will be some two million passengers on the domestic airlines alone and that the foreign lines will carry almost 300,000 more, 2,300,000 passengers in all.

But men like you know that the non-scheduled flyer is far more numerous, far more troublesome, perhaps, and certainly far more influential than his more spectacular brother of the scheduled airlines. You may recall that verse of Rudyard Kipling which begins . . . "The liner, she's a lady . . ." He pays due tribute to the magnificent surface ships that, in his day, carried the blue ensign of the British naval reserve, with bands playing and ladies dancing, throughout the seven seas. But the whole burden of his song — and he sung it well — was this: — Important and glorious as these great ships might be, they were not the solid backbone of the great British mercantile marine. No. First importance in that vital element in British economy he gave, not to the liner, who was a lady, but to the "scruffy little cargo boats," under the red ensign of business, that went "puffing up and down."

So today, where there are but about 350 of our lady liners of the sky, there are eleven thousand of these smaller craft in the hands of private and non-scheduled flyers. They carry more passengers than the liners. They fly more miles. And, gentlemen, the eager customer is knocking at this door of non-scheduled aviation just as eagerly as he is knocking at the doors of the airlines—and here are the figures to prove it.

Today there are 26,000 pilots as against 21,000 a year ago. During the first six months of 1939 there were made and sold—*sold,* mind you!—a total of 1,627 domestic civil aircraft as against only 853 during the same period of 1938. That is a gross increase of over 90 percent. But the classification in which that increase falls is, to my mind, more important than the increase itself. Of these newly made and sold planes in the first six months of this year, 1,362, as against 602 for the like period a year ago, were one and two-place, single-engined, cabin monoplanes. Only 56 of all the new planes made and sold were multi-engined aircraft destined for the airlines. All the rest — and on the basis of these figures there will be well over 3,000 such new airplanes made and sold during the current calendar

year — will be those little craft that will go "puffing up and down" the airways, and off the airways, of the United States.

There indeed is the new and eager customer for civil aviation in the United States with money jingling in his pocket. Three thousand such planes this year is thirty times the number the aircraft industry will make for and sell to the airlines.

During the last year there has been an increase in the number of certificated pilots in the United States of almost 6,000. That is before reckoning any results of the student pilot training program in which we are now engaged. Suppose — and it is a sound supposition — that we get another six thousand new pilots licensed through the usual methods between now and the thirtieth of June, 1940. By that time we believe we shall also have licensed 10,000 pilots from the student training program. And 26,000 plus 6,000, plus 10,000 would make 42,000. So that when we say that the nation and the states will have to plan for 40,000 pilots in the United States by the end of the current fiscal year, we would seem to be indeed conservative.

Let me right here repeat my word of caution to some of the weary veterans. I don't blame them for being weary. But I've heard them, with some alarm say such things as this — "What, WHAT are we going to do with these thousands of new crazy kids taking up flying?"

In the first place, they won't be crazy kids, if you and we go about our jobs in the right way. And in the second place, and by far the more important place, they are a vast new crop of primary customers for all that aviation can manufacture and all that it can provide in the way of services. And I never saw a sound business man who ever said, at the approach of sixteen thousand new customers in a year, "What am I going to do with them!" The sound business man goes out and hires the extra hands and sets up the new facilities to make and to sell them what they want to buy.

Mind you, I said they are 16,000 new *primary* customers for aviation. They are the pilots. Any of them who can possibly do so will bu planes to pilot in. The secondary customers are the passengers. Non-scheduled flying in the last ten years has carried an infinitely larger number of passengers than the scheduled airlines. Last year, however, the number of each came pretty close to a million and a half with the number of private passengers still slightly ahead. So, if we are right in our estimates that the foreign and domestic airlines of the United States will carry 2,300,000 passengers this year, it certainly is safe to assume an equal number of passengers for the non-

scheduled flyer, and that, my friends, brings us into the year 1940 to an industry with certainly more than 5,000,000 passengers, 5,000,000 men, women and children steadily buying the services of this new utility, civil aviation.

Every month that goes by confirms the conservative character of these estimates. Just before leaving Washington, I saw the traffic figures for the domestic airlines. They make another all-time high record for air passenger and express business. Every element by which traffic and revenue may be measured is not only from thirty to fifty percent above August a year ago, but, instead of beginning to flatten out as August usually does in relation to July, this August is up to thirty percent ahead of this July — and July 1939 itself was an all-time high record of airline business done.

Nobody in the Civil Aeronautics Authority is fatuous enough to claim credit for this sensational development. It was inherent in the steady progress that has been made for years. But I, at least, do not hesitate to pay tribute to my colleagues on the Authority and the Air Safety Board for two things they did to bring the inherent virtues of civil aeronautics home to the great American public.

One might be called a sound piece of product analysis; the other a stroke of salesmanship. A year ago it was found that the airlines, actually, were making an excellent safety record — 13,000,000 miles per fatal accident in 1937. But then also was found the shocking fact that the non-scheduled flyer was making anything but such a handsome record. He was flying only a little over half a million miles per fatal accident in 1937. And it was found that such airline accidents as did occur were all too likely to group together in the bad weather of winter.

So, first of all, the Authority and the airlines agreed upon added safety precautions for the winter operations of 1938-39. The airlines more than lived up to the agreement. They made the magnificent record of last winter with which you are all familiar. But, at its conclusion, the Authority violated a precedent. Quite properly, perhaps, the individual airlines have always felt it unwise to boast of their safety performances. The Authority was under no such inhibition. Last March and again and again since, its members have proclaimed the fine record the airlines made then and are continuing to maintain. The salesmanship of this was that not only did it convince the personnel of the airlines and our own personnel that something could be done about accidents, but it convinced the travelling public that something certainly *was* being done about them, and that that something was something very effective.

These things, I submit, have contributed enormously to the public confidence which has brought these amazing new swarms of customers, with money in their hands for fares, to the airline ticket windows since that fine winter record was not only attained but proclaimed.

Events have proved that the Authority's product analysis job on the non-scheduled flyer was equally effective. Grove Webster has told you how, all through the country, boys and girls are being taught by thousands how to fly in a way that has proven itself to be the safe way. The ten thousand students we expect to graduate from these courses and to license as private pilots next June are not "crazy kids." They are youngsters who have gone at it seriously. They will be so trained that ingrained deep in their subconsciousness will be the concept that the only way to fly and to keep on flying is to fly within the known limits of safety. You can readily realize the effect when, as Mr. Branch has told you, we have 70,000 pilots in the next few years, by far the largest number of them trained in this indubitably safe way. And that brings us to the second object of the student pilot training program.

The indirect effect of this training is already startlingly evident. Wherever these courses this Spring were given, the sisters and the cousins and the aunts of these boys flocked to the airports and took charter and sight-seeing flights. So widespread was this effect that the instructors, who were also fixed base and charter operators, had to beg off giving student instruction during the week-ends and turn to the business of flying the relatives and friends of the students. These relatives and friends were convinced that if their boy could do it, it must be safe.

There is a potent and patent analogy for us in this changing state of mind. I was reading the other night "The Turning Wheel" by Arthur Pound. Reviewing the history of transportation he recalled that the automobile in the late nineties was a more unpopular vehicle than the airplane ever was, because it was right down on the roads of that day and scared not only a lot of horses but a lot of people. He wrote:

"Obviously, this popular distrust of the motor car had to be overcome, and the way to break it down was to make automobiles so common that thousands could drive them and more thousands ride in them daily; then horses and humans alike would grow accustomed to their passage; then the farmer and the working-man alike would learn to look upon the automobile, not as a rich man's toy, but as a convenience which he might hope some day to possess. The conversion of the populace would begin as soon as any considerable number of car owners started taking their neighbors for rides. After even one ride the small boy would be on fire to own a car when he grew to be a man."

Continuing, he said:

"Quantity production, it is now clear, was the key not only to the financial success of the industry but also to winning the public mind away from its traditional enmity. A car had to be small and strong and simple. The first manufacturer who could bring a car of that kind to the public 'at a price' would score an immediate financial advantage and at the same time clear the way for the whole industry to surge toward large proportions."

I leave it to you gentlemen — have we not, today, arrived at that conversion of American public opinion towards the airplane. I leave it to you whether or not, on the figures I have given you, the way has been cleared "for the whole industry to surge forward to large proportions."

Talk about mass production! Buick "mass-produced" 8,500 automobiles in 1908 and that same year Cadillac won the Dewar trophy in London for an interchangeability of parts possible only by mass production methods. Those steps led to domination by a great American industry in the automobile field.

Internationally, we can say that today's actualities will, almost inevitably, lead to American domination of the aviation field, with all such domination implies nowadays in national prestige and power, an implication which the automobile never carried, an implication which is, in fact, peculiarly the airplane's.

The wisdom of Congress in encouraging this kind of growth has been amply justified, for, today, this country finds itself with a civil aviation establishment already so much larger than the civil aviation establishments of all the rest of the world, that no other nation or combination of nations would ever dare to challenge its conversion into an arm of combat. In the bone and sinew of our economic life Congress can now pride itself in finding security in the air today and its normal healthy growth to meet any forseeable tomorrow.

You have been told in the course of this meeting what we could tell you out of our own experience. We have frankly asked you for your help. I feel particularly free to ask for that help because, through over twenty years of meeting the public in no less than eight departments of the federal government, I have never dealt with a group of men in an industry, or representing the action of the states upon an industry as you do here, who have such a high concept of the public and national aspects of your duties as have you men from the ranks of the aviation industry and the ranks of the state authorities.

We are ready, willing and anxious to help you. But, I repeat to you again, all that the federal government can do, all that you state officials can do, all that the industry itself can do is as nothing without

the aid of one other — that strange little fellow, the American customer — and he is here. There is no economic ill — in the construction and operation of aircraft, in the investment or operation costs of airports, in the provision of airways and their control, or in the devisement of new ways to improve the product — which the customer's desire to purchase and to pay for cannot solve.

His arrival on the scene as I have described it to you in figures enables us to go to the Congress of the United States with *his* powerful voice behind us. That voice will back you today and tomorrow when you go to your own legislatures. Neither you nor we are any longer crying in the wilderness in the hope of things to come. John Q. Customer is here. And his arrival makes aviation economically safe and useful to this nation and its people as it has long been technically safe through the efforts of men like you.

EDITORIAL

NINTH ANNUAL MEETING, N.A.S.A.O.

From the formation of the National Association of State Aviation Officials this Journal has been its official publication. The assignment has been a proud and effective one because of the never failing good and wide-range papers on aviation subjects, the discussions with which these have been interlarded, and the official reports and resolutions which have summed up the year's work of the organization. To our notion an annual meeting of the N.A.S.A.O. attracts a generous portion of the pick of top flight aviation personnel, and the Ninth Annual Meeting held at New Orleans October 14-16, 1939, was no exception.

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

NINTH ANNUAL CONVENTION, NEW ORLEANS,

OCTOBER 14-16, 1939

The following are the officers for 1940:

President ..... D. O. LANGSTAFF
Director of Aviation, State of Louisiana

First Vice-President ..... RAYMOND R. STAUB
Portland, Oregon

Second Vice-President ..... DEXTER C. MARTIN
Director of Aeronautics, State of South Carolina

Third Vice-President ..... ASA ROUNTREE, JR.
Director of Airfields and Developments, State of Alabama

Secretary-Treasurer ..... GEORGE C. ROBERTS
Secretary, Illinois Aeronautics Commission

Legal Counsel ..... GEORGE B. LOGAN
St. Louis, Missouri

Regional Vice-Presidents

NE —CHARLES L. MORRIS, *Commissioner of Aeronautics, Connecticut.*

SE —HERBERT W. WHITNEY, *Director, Aviation Division, Florida.*

EC —SHELDON B. STEERS, *Assistant Director, Department of Aeronautics, Michigan.*

NC —I. V. PACKARD, *Secretary, Nebraska Aeronautics Commission, Nebraska.*

SC —WALTER B. JOHNSON, *Commissioner, Dept. of Public Safety, Oklahoma.*

SW—W. D. HAMMOND, *Chairman, Utah Aeronautics Commission, Utah.*

NW—W. H. HILL, *Director of Aviation, Idaho.*

The following resolutions were adopted:

RESOLUTION NO. 1

WHEREAS, Past efforts of this Association towards the obtaining of Federal grants for airport construction has been unsuccessful, except to the extent of obtaining a report of the Civil Aeronautics Authority recommending same, and

WHEREAS, This Association is unanimously of the firm opinion and belief that commerce by air can never be fully "encouraged and developed" to the full extent necessary to establish a "system of transportation by air adapted to present and future commerce, the national defense, and the needs of the postal service" until the Federal Government aids in the construction of airports,

THEREFORE BE IT RESOLVED, That the National Association of State Aviation Officials militantly organize itself for the obtaining of such Federal author-

ization and appropriation, and to that end, be it resolved that the President of the National Association of State Aviation Officials appoint a committee authorized to draft an amendment, either to the Civil Aeronautics Act of 1938, or to existing highway legislation, or an independent appropriation measure as this committee shall deem best, the effect of which legislation shall be to authorize the Federal Government to appropriate the necessary funds, to construct and to aid in the construction of airports, and further authorizing and directing the Federal Government in such program to cooperate with the authorized state aviation agencies to this end in such states where these agencies exist.

RESOLUTION NO. 2

WHEREAS, The Civil Aeronautics Authority now carefully examines and investigates repair stations and certificates such repair stations as meet its stringent requirements, and

WHEREAS, In granting such certificates to the repair stations the Authority is expressing its opinion as to the ability of such repair stations to make repairs in accordance with the Authority's regulations and specifications, and

WHEREAS, Even though such repairs are now made by a certified station and in accordance with the Authority's regulations and specifications, the owner of such aircraft is not permitted to operate it until such aircraft is inspected by an inspector of the Civil Aeronautics Authority, and

WHEREAS, This frequently results in serious delay and loss of use and expense to the owner awaiting the examination of such inspector, and

WHEREAS, True encouragement and development of aviation is best served by permitting the unrestricted use of proper aircraft and by removing hardships and impediments which are unnecessary,

THEREFORE BE IT RESOLVED, That upon the completion of any repairs to a properly certified aircraft by a certificated repair station and the certification by such certificated repair station that such repairs are made in accordance with the regulations and specifications of the Authority, said aircraft should be permitted to operate for a period of at least thirty (30) days, during which time it shall be the duty of the owner to present his aircraft for inspection to a proper Civil Aeronautics Authority inspector to secure final approval for continued operation of such aircraft.

RESOLUTION NO. 3

WHEREAS, In the past there has been great difficulty in securing satisfactory cooperation between Federal agencies and State agencies, and

WHEREAS, The Civil Aeronautics Authority is attempting to solve this lack of cooperation by the appointment of a State Coordinator in the Division of Regulations, in accordance with a resolution formerly adopted by this Association,

THEREFORE BE IT RESOLVED, That this Association approve the appointment of such Coordinator by the Civil Aeronautics Authority and particularly approve Mr. Elwood B. Cole, who has been appointed Coordinator, and respectfully urges that the Civil Aeronautics Authority give earnest attention and heed to the information gathered and to any recommendations made by the State Coordinator.

RESOLUTION NO. 4

WHEREAS, The National Association of State Aviation Officials has per-

formed a major service to Civil Aeronautics by enthusiastically supporting the current Civilian Pilot Educational Program of the Civil Aeronautics Authority, and

WHEREAS, State agents have personally induced many educational institutions to join in this educational effort and to apply for the allocation of student pilots, and

WHEREAS, Said State Aviation Officials have been largely responsible for the general acceptance by educational institutions of the proposed plan, and

WHEREAS, The Civil Aeronautics Authority has not seen fit to communicate its decisions with respect to the acceptance of educational institutions in the several States or its decisions with respect to the allocation of such students to such educational institutions with the various state officials, and has not seen fit to consult with these officials prior to reaching such decisions,

THEREFORE BE IT RESOLVED, That the National Association of State Aviation Officials deplores the failure of the Civil Aeronautics Authority to communicate or consult with the various state officials, and they completely disapprove of the failure of the Authority to keep the state agencies informed of the progress of the program which failure has been a great embarrassment to the state officials and a disadvantage to the educational program.

RESOLUTION NO. 5

WHEREAS, The Civil Aeronautics Act of 1938 was enacted largely through the support of the various State agencies charged in their respective States with the fostering and developing of aviation, and

WHEREAS, The individuals occupying these positions within the several States worked diligently and effectively with their Congressmen and Senators for the passage of such legislation, and

WHEREAS, By the terms of the Act the members of the Civil Aeronautics Authority were authorized to cooperate in the administration of the Act with agencies in the several States, and

WHEREAS, It was the clear intention of Congress that, although not directed to do in so many words it was, nevertheless, intended and understood that the Civil Aeronautics Authority would so cooperate, and

WHEREAS, It appears to be the interpretation of the Act on the part of the members of the Civil Aeronautics Authority that same grants to the said Authority the exclusive jurisdiction over all aviation to the exclusion of any jurisdiction on the part of the States,

THEREFORE BE IT RESOLVED, That unless a clear interpretation can be secured of the function of the several States with respect to aviation within their boundaries, and unless full cooperation can be secured between the Civil Aeronautics Authority and the State agencies with respect to the fostering, encouragement, control and regulation of aviation within the States, that the National Association of State Aviation Officials and each individual state official request his Congressmen and Senators to bring about such amendments to the 1938 Act as will define the functions of the State and Federal Government with respect to aviation and provide a definite requirement for the cooperation and coordination of these separate functions.

RESOLUTION NO. 6

WHEREAS, It is the contention of the National Association of State Aviation Officials that the Civil Aeronautics Authority should make an immediate

declaration as to the essential length of a runway for the safe operation of airplanes of all types, and

WHEREAS, The present regulations which govern the landing and take-off characteristics of airplanes as promulgated by the Civil Aeronautics Authority that they not exceed a distance of one thousand (1,000) feet to rise and not exceed a speed of sixty-five (65) miles per hour to land, and

WHEREAS, A runway length of three thousand five hundred (3,500) feet constitutes under said regulations a safety factor of over 300 per cent, and

WHEREAS, Certain existing planes have been allowed a provisional overload,

NOW THEREFORE BE IT RESOLVED, That the National Association of State Aviation Officials go on record in opposition to any change in said regulations which would increase take-off distances or landing speed or would allow "provisional overloads" and also recommend a specific declaration by the Civil Aeronautics Authority that runways of three thousand five hundred (3,500) feet in length, having clear approaches, based on a glide ratio of twenty to one (20 to 1), constitute an adequate and safe facility for the operation of any type of airplane under normal sea level conditions.

RESOLUTION NO. 7

WHEREAS, The Civil Aeronautics Authority has authority to issue certificates of public convenience and necessity with respect to the establishment of scheduled air transport routes, and

WHEREAS, To date the so-called Feeder Line type of operation appears to have received little, if any, consideration, and

WHEREAS, This Association is of the opinion that this type of air transportation is necessary for the orderly development of aviation in the towns and cities not justifiably served by the present scheduled air lines, and

WHEREAS, This Association also is of the opinion that this type of service is necessary for the continued operation and maintenance of certain existing airports,

THEREFORE BE IT RESOLVED, That this Association urge the Civil Aeronautics Authority to issue at least one certificate of convenience and necessity to a so-called feeder line in order to determine the feasibility of this type of operation.

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PRESIDENT'S REPORT FOR THE YEAR ENDING OCTOBER 12, 1939

New Orleans, Louisiana

In a brief report dealing with the past year in aviation, it is difficult to give adequate coverage to even a few of the more important developments. For, only a year ago, a new Federal agency was just assuming jurisdiction, and was beginning to put into effect the tremendous concentration of duties imposed by the Civil Aeronautics Act.

Even before the newly-appointed members of the Civil Aeronautics Authority formally assumed the duties of their office, criticism was being levelled at them from some quarters. This Association, however, adopted a policy of watchful waiting — believing that this new arrival should be given the opportunity to overcome its internal growing-pains before being criticized.

But after a few months, it became apparent that, in Washington, all was not entirely in accord with the desires of the industry, and it seemed that this Association might well attempt to remedy some of the things we thought were wrong. A few criticisms were therefore directed toward the Civil Aeronautics Authority, but it should be recognized that these criticisms were not aimed at the fundamental concepts upon which the Authority has been built. This is important to remember — because we, at this Convention, must face the fact that during the next twelve months there may develop a well-planned program to transplant the Civil Aeronautics Authority — perhaps to place it back again in the Department of Commerce, which it outgrew several years ago, and whence it was only recently removed; or perhaps to put it in some new governmental agency under current reorganization plans; or to split its functions again among several different Federal bodies.

I do not know your feelings in this matter. If it had come up for decision during the past year, I would have maintained, as I do now, that, fundamentally, the present type of organization in Washington is the best that has yet been devised for aviation. I repeat that no word of criticism has been directed at the basic concept of the Civil Aeronautics Authority. The only criticisms have been aimed at a very few of the functional and administrative details. It has been, perhaps, a disagreement as to emphasis, and as to the direction and timeliness of effort.

But this belief may not entirely conform with your wishes. So, for the protection of this Association, and in order that we may be prepared to take a firm stand if the question should arise, I urge that, by resolution or some other suitable means, you inform your incoming president how you desire him to act, if action be necessary.

At our Convention a year ago, it was decided to restrict the number of resolutions to a workable quantity, and to use them as a guide for the Association during the ensuing year. This has proven a sound plan, and it is recommended

that the Association continue it in the future.

Those resolutions — our program for the past year — dealt with:—coordination between the Federal Government and the States; Federal Aid for Airports; Maximum requirements for airports; the needs of private flying; congressional committees on aviation; feeder services; and airport zoning. This report will therefore confine itself almost entirely to a discussion of these several points.

Coordination. The resolution on coordination had hardly been passed before a wire was sent to the Civil Aeronautics Authority Chairman, advising him of its import, and requesting that a program be promptly developed to coordinate the efforts of the Authority with those of the several states. We believed then, as we do now, that with such unity of effort, aviation would prosper – without it, we would have a hopeless jumble of disjointed plans, no one of which would be fully effective, because of misunderstandings, conflicting interests, and the fact that only partial use was being made of all available knowledge.

After several months of correspondence and consultation, results were achieved. A State Coordination Section was first created in the Private Flying Division of the Authority, although it had been the opinion of this Association that the responsibilities involved would justify the creation of a staff office. However, within the last few days, a change was made that brought coordination more nearly in line with our thoughts:— a State Coordinator has now been set up in the office of the Director of the Bureau of Safety Regulation. The person picked to fill this post is a former state official, who, for many years, was active in the affairs of this Association. The Bureau Director himself is a former state man and past-president of this Association. Therefore, it seems that an effective program of state coordination is well under way—and it should only require mutual *cooperation* to bring about complete *coordination.*

The establishment of the Coordinator, coupled with the fact that a number of proposed changes in regulations and procedures have been submitted to our Association and others before being put into practice, seems to indicate a cooperative attitude on the part of the Civil Aeronautics Authority. But unfortunately this attitude has not yet completely permeated all Sections.

Classic example in support of this statement is found in the history of the Civilian Pilot Training Program. This program was conceived and developed in a very propitious manner. The Civil Aeronautics Authority in the fall of 1938, was ordered to prepare, on only a few days' notice, a plan for government training of civilian pilots and mechanics. Realizing the magnitude of the task, the Authority set a wise course, and called in to Washington some 15 to 18 persons from all parts of the country. To this group was presented the problem, and a suggested method of procedure toward reaching a solution. Within 48 hours, a complete program had been prepared in minute detail, for submission to the administration.

Our Association was amply represented in this meeting, and we fully endorsed the plan as it was finally drafted. However, when the "Trial Training Program" was announced from the Civil Aeronautics Authority, it bore only a vague family resemblance to the first plan, and it appeared to have serious flaws in many of its aspects. Neither the drastic changes, nor the reasons for the apparent flaws, were ever submitted to the group that drafted the original plan. Therefore, the "trial program" was subjected to severe criticism from many quarters — criticism that could have been avoided, or at least minimized, by a continuation of the cooperative spirit evidenced at the outset.

This is one sample of non-coordination — and the unfortunate misunderstandings that result from it. However, in fairness to those in the Civil Aeronautics Authority who have made a sincere effort to cooperate, let it be recorded here that those efforts have everywhere been beneficial to all concerned (CAA, States, Industry, Pilots), and we can envisage the time when smooth intercoordination through the new office of State Coordinator, will be advancing the interests of the industry at large.

One word more before we leave the pilot training program. Even if it were to accomplish nothing more, this program would be well worth its cost if it only resulted in a standardization of instruction. Progressive steps have previously been taken toward this ultimate goal; but not until now has there been any attempt to re-examine and re-certify all instructors as to their qualifications to perform the most fundamentally important task in aviation:— the proper training of those whose handling of the controls is responsible for the safety of everyone, whether in the air or on the ground.

In order more effectively to standardize instruction, the Authority has prepared and published a manual on flight training, which presents in masterful fashion the manifold problems involved. It is a credit to its sponsors and to those whose painstaking effort was responsible for its perfection.

Federal Aid for Airports. For years, our Association has striven for a substantial, comprehensive Federal program for airports. It has been our belief, because of the interstate nature of the airplane, and because such a large percentage of the use of airports is in the service of interstate flying, that the Federal Government should participate financially in the costs of construction and operation of airports. The passage of the Civil Aeronautics Act was the first ray of hope that such an eventuality was in prospect. Two things pointed toward this hope:— first, an "air navigation facility" was defined in the Act to include landing areas; and, second, the Administrator was empowered "to acquire, establish, operate and maintain . . . air navigation facilities." Thus, the Administrator may acquire, establish, operate and maintain *airports* — at least, those that come within the Federal definition of "airport", namely:— "a landing area used regularly by aircraft for receiving or discharging passengers or cargo."

The opening gun on the airport front was also fired by the passage of the Act, in requiring the Authority to make a survey of airports and airways, and report to Congress with definite recommendations. This gun hung fire — in fact it very nearly mis-fired — and the final shot did not hit squarely at the mark. But we must realize that it was, nevertheless, just the *opening* gun — a kind of range-finder — and with proper support from the lines, it should eventually turn into a victory.

In order to accomplish this survey properly, the Civil Aeronautics Authority appointed an Airport Survey subcommittee to hold hearings, take testimony and report to the Authority. Your President served as one of the members of this subcommittee — your Airport Committee appeared before it and presented the ideas of the several states — and we endeavored wherever possible to protect the states' integral part in the program, and to help develop a sound procedure for Federal-State-Local cooperation in any plan to be recommended.

After a time, a solution emerged, which seemed at least to provide a basis for a beginning. The airport survey report was submitted to Congress, and, without attempting to outline for you the many developments of the subsequent four months, the simple fact is that Congress failed to act.

The Civil Aeronautics Authority has been roundly criticized for not having pursued a more aggressive course in securing congressional adoption of the recommendations included in the Report. I have refrained from joining in this criticism, because I believe the task fell squarely on our own shoulders. A Federal agency can recommend — but Congress acts on the voice of the people. If we, in aviation had stood solidly behind the recommendations of the Civil Aeronautics Authority — if, more particularly, some powerful aviation association with headquarters or agents in Washington had assumed a forceful leadership, and with a finger on the nation's pulse had endeavored to guide the Federal Airport Program to consummation — I believe we would today be embarked upon a substantial national program of airport development, particularly if we had not lost much valuable time in quibbling over petty details that could have been clarified by later amendments.

However, I do not yet understand certain rumors to the effect that the Civil Aeronautics Authority attempted to forestall congressional action on the program. Particularly am I concerned about the only reliable report with which I am personally acquainted:— namely, that when a member of Congress inquired of the Authority what should be done now that the Airport Report had been filed, he was told by someone in the Civil Aeronautics Authority that nothing further was necessary. It has not been possible to trace this to the individual credited with the reply — and, therefore, the mis-impression thus given has not been fully corrected — but there is no doubt that this reply was largely responsible for the failure of Congress to consider seriously a Federal Airport Program during this past session. Whatever causes may have combined to prevent congressional approval, "we the people" must shoulder our portion of the blame, and this very failure should serve to redouble our efforts in the months to come.

Maximum Airport Sizes. We have been told for many years that the Federal Government is attempting to determine the ultimate length that will be required of an airport runway. Our Association has ceaselessly endeavored to speed the millenium — with no more success than a philosopher trying to speed the second coming of Christ. A year ago, we passed a resolution, recommending a maximum requirement of 3500-foot runways, based on a glide-ratio of 20 to 1, under standard air conditions; and we opposed provisional gross loading of land planes.

Unfortunately, we are no nearer the millenium today than we were a year ago. We still are unable to approach the cities in our states and say, "You will *never* need to build an airport larger than 3500 feet" — or 5500 feet — or even 10,000 feet. All we can promise with some degree of truthfulness is that the Federal Government may, *tomorrow,* issue a certificate to a manufacturer, permitting him to build an airplane which will require two dozen or two hundred cities to add another thousand feet onto their runways. There must be an end, and our Association should continue aggressively to pursue this maker-of-white-elephants until it is permanently and irrevocably eradicated.

Private Flying Section. A year ago, there was some concern as to just what would develop in the Civil Aeronautic Authority's newly-announced "Private Flying, Fixed Base Operator's Section." We did not know where the Section's final resting place would be on the rapidly changing organization chart of the Civil Aeronautics Authority. Therefore, we petitioned by resolution, that the Authority set up the private flying section "as a separate and distinct entity functioning through its chief directly responsible to the . . .

Administrator without direction by, or responsibility to other divisions of the Authority."

Since then, the organization chart has emerged from a formless, shifting picture deep in the troubled waters — and it has taken definite shape. Three Bureaus compose the actual "striking force" of the Civil Aeronautics Authority— and we cannot yet hope that private flying would justify the creation of a fourth. Therefore, the Private Flying Division now rests within the Bureau of Safety Regulation. It is, however, a separate Division within this Bureau, and it seems, for the time being at least, generally to conform with the spirit of our resolution.

Congressional Committees. Our last Convention again went on record, as it has for many years past, requesting standing congressional committees on aeronautics. For a time, it seemed that perhaps we might see this hope materialize, thus giving congressional recognition to the national importance of the industry, and to the need for specialized handling of specialized aviation legislation.

But there are, and perhaps there always will be, certain political self-seekers who try to enhance their own interests by donning wings — and wings are not becoming to them. Who can forget the tragedy of 1934 when the industry was thrown into chaos, when progression became retrogression, when the cream of the Army's pilots was skimmed — then spilled — by the clumsy ladle of politics?

And yet, politics again entered the field in the matter of standing committees. We seemed almost assured of action this past year, but it was prevented by two senators, each vieing for the Chairmanship. Until some political seaman has discovered how to untie this gordian knot, aviation cannot advance into the realm of a major national consideration, and our best efforts should continue to be applied to this vital need.

Feeder Services. This Association has gone on record in favor of the development and establishment of so-called "feeder" air lines, thus recognizing the fact that the present established air routes directly serve only a little over one-quarter of the nation's population (often with unsatisfactory and infrequent schedules), and that of the 4000 cities in the United States with over 5,000 inhabitants, there are only 210 cities, or about five per cent, on the air lines.

Concentrated effort toward accomplishment of the purposes of this resolution was withheld, pending the Civil Aeronautics Authority's decision on the application of Airline Feeder System, Inc., for a certificate of convenience and necessity. The decision was made on June 9, 1939, and the request for the certificate was denied.

At first blush, this seemed a very poor commentary on the attitude of the Civil Aeronautics Authority toward feeder developments. Here was a small line that had struggled to get a footing under the old Bureau of Air Commerce— it had operated without benefit of air mail, and had been required to run a scheduled service at a heavy financial loss in order to be qualified to file an application under the so-called "Grandfather Clause." And after all this, the application to be allowed to continue operations had been rejected — on grounds that the line had not rendered adequate and efficient service, having carried relatively few passengers during its existence, having run only one scheduled trip per week during the latter part of its life in accordance with permission granted by the Civil Aeronautics Authority and having been forced into bankruptcy.

This decision might seem to promise a black future for the development of supplementary air transportation services; but careful study does not justify this conclusion, at least to date, because it must be realized that Airline Feeder's application could not be decided on the general ground of a need for the service. It had to be decided on the specific considerations required under the grandfather clause — namely, (1) that the airline had been "an air carrier, continuously operating as such" from May 14, 1938; and (2) that the service rendered for such period had been *efficient and adequate*. The admitted facts in the case could not support these latter requirements, and the application therefore had to be rejected.

It is important to realize, however, that this does not, of itself, indicate the Authority's position as regards feeder services. The decision that will demonstrate whether or not the present Act, and the present administration of it, will permit the expansion of transport services by means of feeder lines, is rolling through the mill-wheels at this moment, dealing with the application of this same company (Airline Feeder System) to establish a *new* feeder service.

It is generally admitted that the present Civil Aeronautics Act encourages the creation of such services — that it is adequate as it now stands. The point that still remains to be demonstrated is whether or not the *administration* of the Act will be such as to permit this most necessary expansion. The Authority's action on the application now pending will furnish the answer.

It may appear from the foregoing that too much emphasis has been laid on Federal matters. However, state problems in aviation are so closely interwoven with the problems, decisions and acts of the Federal Government that we must at no time fail to recognize the actual or potential influence of the national aviation program on us. Our duties in the states begin where the Federal jurisdiction ends, whether that ending be caused by constitutional limitations or by the limitations of personnel and appropriations. It is for this reason that the foregoing remarks on Federal aspects have required substantial treatment.

Airport Zoning. The problem of protecting the approaches to airports is one of constant conflict — legal conflict, the rights of land ownership, the use of the air space, reasonable or unreasonable personal attitudes in a multitude of ways. Where there are hazards to air traffic, a solution has usually been attempted by agreement with adjacent property owners. In many cases, reasonable requests were met with a cooperative attitude; but, in altogether too many instances, results were not so readily attained.

Realizing the seriousness of the problem, this Association last year passed a resolution urging that each state enact legislation, permitting the zoning of areas adjacent to airports, and the removal of hazards by condemnation if need be.

Thirty replies have been received to a zoning questionnaire recently forwarded to the 48 states, and fourteen of those thirty replies indicated that there is some law regarding airport zoning or removal of hazards. The Civil Aeronautics Authority's zoning manual, recently published, tells us that five other states, who failed to answer the questionnaire, also have zoning laws. These 19 acts provide variously for state or local zoning, for condemnation or purchase, for protection against future hazards or for removal of present hazards. Gliding ratios are in some instances determined by statute, and vary from 7-1,

to 20-1. Limits of jurisdiction vary from 500 feet away from the airport to 21,000 feet away.

The complicated legal problems involved seem to have acted as something of a deterrent to general adoption of adequate laws. Opinions differ as to just how much "public need" there is for flying on many airports, and hence as to how far the state or local governments may go in restricting the rights of private individuals to the full enjoyment of their land. Opinions differ, also, as to whether or not the state or local government may, constitutionally, restrain these owners, or remove hazards, without due compensation. The fundamental basis for argument seems to be whether hazards to air traffic come within the scope of police power, or whether it is a question of eminent domain. Some well-informed persons believe that the solution may be found, not in zoning, or in condemning or acquiring adjacent property, but, rather, in purchasing a broad cone of actual air-space projecting outward and upward from the boundaries of the airport. It is a subject so complex that its many ramifications can hardly be more than suggested in this report. I urge that a full discussion be had during this Convention — and that then a capable committee be appointed to study the matter in full, and present findings and recommendations to our next annual meeting.

Association Administration. It has been my desire, during my term as president, to try to weld our Association more closely together during the interim between annual conventions. It has always seemed to me that continuity of effort has been handicapped by a lack of some unifying, year-around program. It was for this reason that an Association Bulletin, as used by several of my predecessors, was continued. I hope it may have served its fundamental purpose of coordinating the efforts of our Association, and I believe a monthly communication of a similar nature might well be made a definite part of the Association's life — whether prepared by the President, or by someone appointed by him — or, progressively, by a series of persons, each writing one issue.

The Treasurer will report later, on the financial status of the Association, but it should be recorded here that it is excellent, although neither your President nor your Treasurer can claim any credit for it, since it was due to a $25.00 assessment per state. Compared to previous deficits, there is a sizeable balance in the treasury; it is up to you to decide what you would do with it, and the Finance Committee may present at this Convention, some recommendations for your consideration. You may wish to make it possible in the future to reimburse Association officers for such travel costs as would otherwise be paid out of pocket, and if so, you should set up some procedure upon which such expenses may be met. Perhaps you will find other uses for the surplus. But, even if it is allowed to accrue over a period of years, I recommend that the $25.00 anuual assessment per state be continued, in order that the effective functioning of our organization may never be predicated on a question of dollars and cents.

In studying from time to time the Constitution and By-Laws of the Association, it has seemed that, drawn as they were nine years ago, they are now in many ways inadequate to serve as our guide. Aviation changes rapidly, and even a cursory glance at the constitution will reveal errors that should be corrected. A temporary committee on Constitution and By-Laws has therefore been appointed to review the situation and report its recommendations tomorrow.

And so I close — with a very inadequate but very sincere word of thanks. I have deeply appreciated the honor you have bestowed upon me — I have tried sincerely to fulfill its duties to the best of my ability. I only hope that from this last year, something of permanent value may remain with you.

Respectfully submitted,

CHARLES L. MORRIS,
President.

REPORT OF COMMITTEE ON AIRPORTS AND AIRWAYS

By Floyd E. Evans, *Chairman*

Here we are once more ready to settle down and wrestle again with our orphan child "The Airport."

As chairman of this session it does not behoove me to take much time in presenting a report of your Airport and Airways Committee as we have several speakers on the program who have very well prepared papers and talks that will I am sure cover a great deal of the field that we are so vitally interested in. I do have some definite opinions on this airport subject, however, and will take the opportunity of presenting them at this time.

Two years ago a thorough, interesting and intelligent report was prepared by the American Society of Planning Officials in cooperation with the American Municipal Association. This document was labeled "The Airport Dilemma." Unless we make more progress toward solving this serious airport problem soon, it is suggested that these associations get out a revised edition entitled "The Airport Tragedy."

We appear today to be no closer to reaching the objective that our association has long sought than we were a year ago. In fact, we probably are not quite as well off as we were a year ago for new regulations promulgated by the only organization that has been our savior during the past years, namely the Works Progress Administration, are such that it is quite difficult, in fact almost impossible, to get an airport project approved. First of all local communities cannot afford to put in the sponsor's contribution of 25% that is required, and the $6.00 per man per month for other than labor costs does not furnish enough money to start to pay for the materials, equipment rentals, etc., required for further development of landing facilities.

The need and necessity of many airports and landing fields located in such manner and so developed as to be an important part of a national network of landing facilities still exists. My statement to you contained in my address as outgoing president, delivered a year ago at Omaha, still holds true. Namely, "The national defense aspect of aircraft landing facilities alone demands federal recognition and in addition these facilities are a vital part of the national air transportation system that will place all of our manufactured products next door to our market. The airplane has already and will continue to speed up our mail delivery and will increase the radius of business activity of our citizens manyfold. Without airports the airplane is useless." This sentiment, I am sure, is endorsed by everyone associated in any way with the aeronautic industry.

The national defense feature of our airports at this time, with the European struggle in full blast, is far more vital than we realized a year ago. Many more miles of air mail routes have been established during the year and more miles will be established in the future necessitating more and more airports and material improvements in existing airports now known as off-line airports. Air express and passenger travel have increased tremendously during the past

twelve months and continues to increase rapidly. This shows definitely that there is a demand on the part of the American Manufacturers and the public in general to utilize fast transportation for speeding up business.

During the past year we have seen many large communities become disappointed by the lack of income at their airports and have failed to make appropriations for further improvement or even the maintenance of same. Many other communities still have the interest and enthusiasm they once possessed but are not in a financial position to further improve or properly maintain the facility in which they have already made a tremendous investment. Encouraged by the United States Conference of Mayors there will no doubt be a so-called "set down" by some of our cities in regard to more local financing of airports.

Laxity on the part of federal officials in the past to recognize the urgency of federal financial assistance for the construction and maintenance of airports has been appalling. It was with the greatest difficulty that any mention was included in the Civil Aeronautics Act of 1938 of federal airport assistance. It was only on the demand of representatives of our association, the United States Conference of Mayors, the American Municipal Association, the National Aeronautic Association, the American Legion, the Private Flyers Association and several other organizations that any mention whatever was included in this most important aviation act.

A survey of the airports of the nation was demanded in this act and in addition a certain concession was made whereby navigation facilities by definition included the landing area of an airport, and the Administrator of the Authority was authorized to designate and establish, operate and maintain said air navigation facilities.

The Airport Survey directed to be made by the Civil Aeronautics Authority was eventually presented to Congress. This report was presented at such a late date that it was impossible to get national support behind the recommendations made. No appropriation bill requesting federal funds for putting into effect the recommendations included in the Civil Aeronautics Authority's Report was introduced until too late in the Session of Congress to even get a hearing.

The way is now open for the federal government to legally participate in the activities we have demanded since 1933. An appropriation is required and that can be secured only by our association combined with other national associations continuing our efforts and keeping our Congressmen informed that the airport problem is really serious and that unless federal participation is secured in the near future our air transportation system and air defense system are in jeopardy.

The above associations, all of whom stood firmly with us on our demands for recognition of the airport problem a year ago are still ready to continue with this support. In addition the newly formed American Association of Airport Executives is developing strength and will exert every effort shoulder to shoulder with us to get immediate assistance. Further, the American Road Builders Association have interested themselves in our problems and I am sure that we can depend upon them 100% for support. I am unofficially advised that this association would, no doubt, get wholeheartedly behind the Vinson Bill or some analogous bill that would provide for federal funds for airport construction, except that that association would demand that the work be done on a contract basis instead of with the use of relief labor. This demand I believe is very logical.

We are all very grateful to the relief administrations that have been so

liberal in their aid to airports, but all of us realize that there has been great inefficiency in this work. Airports have in many instances been used as labor pools where great number of relief workers could be concentrated with a minimum of supervision, often with inadequate equipment and tools. This resulted in extreme inefficiency, probably more so than on any other type of relief project.

We stand today in a far better position to secure assistance in our demands for federal aid from the United States Army Air Corps and War Department than ever before by virtue of the necessity of many improved airports to accommodate our expanded air force. Now is the time to take advantage of this assistance when the nation is so enlightened by the necessity of an air force second to none in the world. I feel we now have in the Civil Aeronautics Authority a very attentive ear for our airport problems. Much change in minds has taken place since members of the Authority have had an opportunity to get into the field and study the problems first hand.

Scheduled air transport operators should now be ready and willing to get behind our move wholeheartedly. When the Civil Aeronautics Act of 1938 was before Congress for action there were so many important features in this act that the airlines were in such dire need of that they could not afford to jeopardize the many important items in this bill for the sake of aiding our association in securing airport aid.

The private plane industry during the past twelve months has gotten out of its swaddling clothes and has definitely shown itself to be a major factor in the aviation industry. Now is the time to coordinate the activities of all of these organizations and make strenuous demands to secure aid before our airports rever to landing fields and our landing fields to cow pastures.

It is gratifying to note that in the report submitted by the Civil Aeronautics Authority definite recognition was given to State Aviation Organizations whereby it was recommended that federal airport grant applications must be submitted to the federal agency through state agencies. It was also recommended that priority of airport grants should be given in proportion to the aeronautics interest displayed by the respective states, especially in reference to such matters as a coordinated plan of airport development. Our association should support these recommendations and see that it is incorporated in such federal legislation that may be submitted to Congress as the result of this report.

As to airway aids, I feel this matter is entirely a problem of a federal agency with the exception of town markings, which surely is a state and local responsibility. Our association should continue our past efforts to see that every town and city in the United States is properly airmarked and such airmarking maintained. A splendid job has been done in most states in this regard and we we many thanks to the Works Progress Administration for their very splendid cooperation and assistance.

I want to express our appreciation also to the National Youth Administration, which has been cooperating with our State Aviation Departments in the construction of seaplane bases and airport boundary markers. This work is surely well worthwhile and is a splendid project for that organization. I believe we could turn toward this same organization for further assistance on the maintenance of our many town markings that are rapidly deteriorating.

Some states are still burdened with the operation and maintenance of the visual type airway beacons, which in my opinion are now obsolete and so little used by the flying public that they could well be discontinued. An appeal to the Civil Aeronautics Authority for the discontinuance of this type of aid by our

association, I believe is now in order. The money used for the operation of these facilities could well be used for more worthwhile purposes.

In conclusion I want to appeal to all state officials to continue their interest in the construction and maintenance of landing facilities in their respective states. No matter how good a job we do in promoting aviation generally and enforcing regulations there will be but one lasting landmark to show of our activity, and that is the airports themselves.

Assistance will come if we continue our efforts to secure it. The ground work has been made and I believe during this coming year we will get very definite and tangible results.

I wish to report that during the past year your aviation committee in addition to submitting a very comprehensive brief on the federal airport aid has followed through with their efforts by the issuance of many hundred of letters to state officials and to members of Congress urging the passage of legislation that would benefit our program.

THE STATES AND THE AIR SAFETY BOARD

By Sumpter Smith*

The other day I overheard a conversation between a couple of messengers who were attempting to fathom the meaning of N.A.S.A.O. Much to my amusement one of the boys ventured the suggestion that the initials might stand for National Association of Select Aviation Optimists.

Although amused at this fictitious definition of the Association which qualified it as a select group of aviation optimists, I could not help but feel that the name was somewhat fitting. As I look back upon the years during which I worked with the Association for common causes, I realize that all of us had been optimists — that we had to be optimists of a practical nature in order to succeed in our work. We expended a great deal of effort for each achievement, always prophesying a tremendous aviation development. Yes, and during the last few years we have seen some of our fondest anticipations realized.

I am firmly convinced that the optimistic attitude maintained by members of this organization — sometimes even in the face of discouraging circumstances — has done much to bring about some of the major developments in aviation. The optimism expressed by the members of the N.A.S.A.O. in the past was optimism because they knew aviation and were men of practical vision. Your last three presidents, Charles Morris, Floyd Evans and Gill Robb Wilson, truly have been modern oracles. In fact, I could go right down the list of membership naming practically every member of the organization since its inception and point out individual prognostications they have made that we are seeing materialize today. Some of these prophesies, if you please, were considered as extremely optimistic at the time they were made and in some instances were even classified as dreams of the distant future — yet today we see them take shape.

Our work, however, is far from complete and we shall have to continue to develop and protect the growth of this "Babe" aviation that we have fostered to its present state of adolescence. In continuing the task before us, our optimism and practical vision must continue — even to the extent that some day all of us might obtain 100 percent of the appropriations we believe necessary to carry on our work.

During the last few years my work has kept me in close touch with you and your work, and the deep personal regard and respect I have always had for your members has continued to grow. Today, as a member of the Air Safety Board, I am glad that I have had this close contact with your organization in the past, and I anticipate an even closer contact with its members in the future; for State Aviation Officials can render an aid of inestimable value in the promotion of air safety in their respective states. We want and need your cooperation.

The Civil Aeronautics Act of 1938 created a new type of three-unit agency consisting of a five-man Authority, an Administrator, and a three-man Air Safety Board. Among their duties, each was charged with some phase of the promotion of air safety. The five-man Authority was vested with the quasi-legislative power to promulgate safety regulations and policies, and to enforce them through

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its Bureau of Safety Regulation. The Administrator was given the task of safeguarding flights by maintaining airway facilities, and by conducting safety research. The Air Safety Board was charged with the investigation of accidents and the responsibility of reporting its findings to the Civil Aeronautics Authority and to the public. Each accident was to be analyzed by the Board, the probable cause determined and then the Board was to make such recommendations as it believed would tend to prevent recurrence of similar accidents.

It is well to point out the fact that the Air Safety Board is not a regulatory body. It only investigates and recommends. The Civil Aeronautics Authority promulgates the safety regulations and directs their enforcement.

Most of the work of the Air Safety Board is carried on by a small compact group located in Washington. However, in order to economize on funds and save time in reaching the scene of accidents, the Board has opened four branch offices. These offices are located at Chicago, Fort Worth, Los Angeles, and New York, and their establishment has been for the convenience of the public and the aviation industry, in addition to their being desirable to effect a more efficient handling of Air Safety Board duties.

The Air Safety Board closed its first year of operation on the 22nd of August with a record of more than 1,000 aircraft accidents investigated and analyzed, and 80 recommendations made to the Civil Aeronautics Authority with a view toward preventing recurrence of similar accidents. Extensive group studies have been initiated in connection with several hundred additional accidents and should be completed in the near future.

Five public hearings were conducted during accident investigations. Information disclosed during these hearings has been received with interest by the airlines and has caused every major scheduled operator in the United States to reexamine and improve, to a greater or lesser degree, their policies with regard to aircraft operation. At least one model of aircraft designed for scheduled air carrier operation has been modified in a manner to insure greater safety, and another model drastically revised in structure. Most of these revisions have been made voluntarily by the airlines and manufacturers as a result of the findings of the Board.

Much of the work of the Board has involved group analysis and detailed study of numerous minor and major accidents occurring in private and miscellaneous flying. These studies have not only resulted in improved structural design of certain aircraft, but have instigated certain changes in flight practices and procedures which will insure greater safety.

As applied to major scheduled air carrier accidents, the study of two or more accidents in a group analysis has afforded results at times impossible to obtain from the study of a single accident. The value of correlating the facts, conditions and circumstances relating to two different accidents is exemplified in a case recently coming before the Board. The evidence concerning the accident being investigated was incomplete and the Board was doubtful about the probable cause. While attempting to obtain more conclusive evidence, the investigators learned of a similar case on another airline in which an accident was narrowly averted. They followed this information to its source and through the testimony of the pilot involved were able to solve the cause and reconstruct the sequence of events in the accident under investigation. Consequently, knowledge was obtained upon which to base a recommendation that probably will bring about a structural modification of one or more types of aircraft now in scheduled air carrier service. As a result, the recurrence of accidents similar to one that cost eight lives may be prevented.

The safety of airline transportation increased approximately 300 percent during the 12 months ending June 30, 1939. I believe that it is reasonable to assume that there will be a continued improvement in safety of airline operations during the next 12 months. Although I am certain that the safety of air transportation will show a marked increase, it is possible that the number of accidents also will increase. During the first six months of 1939, the airlines carried 41 percent more passengers than they did during the similar period in 1938, and during July 1939, they carried approximately 65 percent more than they did during the same month in 1938. Therefore, if we base estimates on past statistics, and allow for a moderate gain in safety, it still is reasonable to expect an increase in the number of accidents during the forthcoming season. This is possible, but I do not believe it is probable. On the other hand, it is impossible to believe that aircraft accidents will disappear entirely. We certainly have not seen the total disappearance of accidents in connection with other kinds of transportation.

The safety of non-airline operations has shown excellent improvement, but it still falls short of the safety of scheduled air carrier operations. This class of flying includes student pilots and pilots engaged in numerous kinds of hazardous operations, such as crop dusting, testing, and exhibition flying, in addition to pilots engaged in charter, sight-seeing and sportsman flying. The promotion of safety among this group primarily deals with overcoming personnel error, and in this respect is similar to the problems confronted by automobile safety engineers. During 1938, over 50 percent of the total number of accidents occurring in non-airline flying involved personnel error. The dangers of personnel errors are further exemplified by their increased predominance as causes of fatal accidents. Approximately 75 percent of the fatal accidents which occurred during this 1938 period involved failure of the human factor.

The elimination of personnel errors affords one of the greatest problems found in the promotion of air safety. The immediate answer probably is to be found in safety education and in enforcement of safety regulations governing aircraft operation. The ultimate solution of a great deal of the trouble, however, extends beyond these first measures. Aircraft and engines have inherent safety characteristics. So long as the pilot is vigilant in his maintenance and operations he can expect these safety characteristics to protect him. When he relaxes his vigilance and does not stay within the operating limitations of his equipment, he invites trouble. Undoubtedly, the expansion of these operating limits will offer the final solution whereby many of the accidents now charged to personnel errors can be eliminated. In this connection, the first few errors of a certain type might be qualified as personnel errors, but a continuation of similar personnel errors indicates possible errors in design.

In nearly all cases the elimination of design characteristics which invite personnel errors will have to begin with new aircraft. This still leaves us with about 12,000 aircraft of past manufacture that are flying today. Of course, many of these planes have excellent inherent safety features, but others, safe enough if held within their limitations, have characteristics that fall short of desirable standards. Probably the most beneficial improvement that could be made to the majority of these planes would be the installation of devices or the incorporation of slight changes in design that would offer protection against inadvertent stalls and spins. In some instances this improvement can be made to aircraft now in service by installation of wing slots or modifications in control surfaces. Even this remedy, which would take time to install on all aircraft

that might be benefited thereby, will not improve the other limitations found in some of the aircraft now being flown such as poor visibility, narrow landing gear tread, and under-powering. Therefore, our first duty is to attempt to restrain operators from exceeding the safe limitations of the equipment in all cases. In the meantime, we can bend every effort toward making detailed studies of aircraft accidents to ascertain improvements in engineering which if made to aircraft will require less vigilance and skill on the part of the operator and thus reduce the likelihood of personnel error.

In undertaking the task before us, we can recommend changes in airplane design that we know can be carried out by regulations promulgated by the Civil Aeronautics Authority because the Civil Aeronautics Authority has control of the manufacturer through issuance of certificates of airworthiness. On the other hand, however, when we recommend that the Civil Aeronautics Authority make regulations dealing with the upkeep and operation of aircraft, we know that its successful execution demands cooperation of the operator and the entire civilian population of the country. It is economically impossible to place Federal inspectors and airway control personnel at every one of the approximately 2,500 airports throughout the nation. In fact, I do not believe that this type of government control is desirable or should be necessary in a nation operating under our democratic form of government.

The States and even the local communities can do much to assist in safety regulation and enforcement in the various localities — especially off-airways. This problem, however, is chiefly a problem of the Authority's and you should hear more about it from other speakers present at this conference. In this connection, however, I have five suggestions to make concerning action that can be taken by states in furtherance of air safety. Although the first two are made as the result of studies conducted by the Air Safety Board, their execution of necessity involves cooperation with Civil Aeronautics Authority personnel relative to regulations and the enforcement of regulations.

The first suggestion is that foolhardy flying be condemned and every effort be exerted to report all violations. Regardless of improvements made to aircraft and regulations made to control the reckless pilot we can always expect to be faced with the problems involving foolhardy flying. The majority of this type of flying is done by individuals who seek the praise of their friends relative to their fearlessness and ability to fly an airplane. Therefore, a general condemnation of this type of flying strikes at the source and should do much to assist in controlling it. The severe punishment of pilots breaking regulations designed to promote sane flying is the only other method by which we can hope to control it. As was previously stated, however, Federal personnel is limited and unless each violation is brought to the attention of the proper authorities, it will be impossible to completely enforce the regulations by prosecution. Therefore, a general educational program undertaken by the various States and cooperation of all local law enforcement agencies in reporting violations will do much toward eliminating this cause of accidents.

The second suggestion is that State Aviation Officials take action to assure themselves that local airports have adequate safety regulations and that the regulations are properly enforced. As was previously stated, it is economically impossible for the Federal government to place enforcement agencies on every airport. Therefore, it becomes the duty of the airport manager or some other individual appointed by the community or State to regulate flying with a firm hand on the local airport. In cases of municipal airports, this problem is somewhat alleviated. On privately-owned airports we find a little different situation.

It might be possible, however, to deputize the airport manager and exercise some control over the situation by local ordinances or State laws. You will probably find that different localities will have certain individual problems, but you must remember that an airport receives numerous visits from strangers and standardization of rules is important. Most of the regulations necessary to safely operate an airport can be found in the Civil Air Regulations and but few additions, if any, will have to be made in the majority of cases. Enforcement is the important item.

The third suggestion involves the immediate notification of Air Safety Board or Civil Aeronautics Authority personnel concerning the occurrence of major aircraft accidents and cooperation in establishing an appropriate guard around the wreckage until the arrival of Federal authorities. Although recently a regulation was promulgated relating to this subject, its importance can not be over-stressed. The adoption of the suggestion is of tremendous importance to investigating personnel of the Air Safety Board, and I believe that in many instances the local civil authorities are not apprised of the value of preserving every detail of the wreckage. In several instances the work of pilfering souvenir hunters has made it difficult to ascertain the cause of the accident. In one case, particularly, did we meet with this problem and the loss of vital evidence became a loss that was felt by the entire aviation industry. Usually local or State civil authorities are the first law enforcement representatives at the scene of a disaster, and we have to depend upon them to preserve the remains of the aircraft intact and in many instances to report the occurrence of the accident. State Aviation Officials can assist us tremendously by further developing this cooperation with law enforcement agencies in their respective States.

Even very minor accidents prove of the utmost significance. The fourth suggestion, therefore, is that State Aviation Officials take whatever steps they can to assure the reporting of each aircraft accident, no matter how small, to Federal authorities. As was previously pointed out, the cause of a major aircraft accident was solved as the result of the analysis of an accident that did not result in a serious accident and had not been reported, but which was uncovered by Air Safety Board investigators at the time of the investigation of a major accident. Similarly, many times the indication of trouble in a minor accident will lead to the prevention of the recurrence of a similar accident with tragic consequences.

The first suggestion is that State Aviation Officials assist in stimulating a public demand for aircraft with maximum safety characteristics. It is realized that the average layman can not set himself up as a technical expert to judge the safety characteristics of the airplane in which he is going to take a flight, or possibly learn how to fly. For this reason, the Civil Aeronautics Authority hast tested each type of aircraft and certificated it as to its airworthiness. However, a great deal can be done to stimulate manufacturers to include and further develop safety features even beyond the present requirements of the Civil Aeronautics Authority. An aircraft may be perfectly safe to operate if operated within its limitations, and if it is given vigilant maintenance. On the other hand, if the airplane is designed to be safer than most against stalling and spinning, if it is designed to give an extra ease of maintenance, offers the pilot in the cockpit exceptional visibility and is equipped with brakes and other auxiliary equipment that makes it easier to taxi and fly, it should be demanded in preference to aircraft not having these facilities and characteristics.

By following the foregoing suggestions, State Aviation Officials can be of inestimable value to the Federal agencies. State and Federal aviation agencies

have much to do without creating an uneconomical overlapping of duties and complete cooperation will offer both classes of agencies the most effective way to meet their common problems. Each of you is interested in developing aviation in your respective State. The promotion of safety is a key to this development. With your individual cooperation the Air Safety Board can assist you in attaining a good safety record for your State and at the same time assist other States to control accident recurrence by what we learn in your State.

In closing I would like to stress the fact that we welcome suggestions from you at all times and want you to feel free to call on us when we can be of assistance. The Federal agencies can *not* successfully carry out their functions without the hearty cooperation of the State agencies, and we in turn feel that by working closely with you, we can together accomplish the greatest possible advance in aviation.

THE COORDINATION PROGRAM OF THE C. A. A.

By Elwood B. Cole*

I am always glad to take part in a discussion panel of this kind and it is particularly gratifying when the subject assigned is one which, in itself, encourages further discussion and which, because of its very nature, invites informality both in presentation and discussion.

My subject is one with which I have been deeply concerned for a number of years. I can well remember the many conferences which were held in Washington between the Bureau of Air Commerce people and several of us representing different states. Our main objective at that time was to secure some kind of direct liaison with the Bureau by means of which our problems could be presented and would be promptly considered. Various degrees of success were achieved over a period of years, and shortly after the Civil Aeronautics Authority came into being, in August, 1938, a detailed program of state coordination was presented for its consideration. The Administrator promptly indicated his approval, and this was followed by Authority action designating Members Ryan and Mason as a committee on the Uniform Aeronautical Code.

A Section was authorized in the Regulation and Enforcement Division, but due to the lack of funds was never staffed. In July, 1939, the Section was transferred to the Private Flying Development Division and I was designated as Chief. After a short time in this Division, another change was made by which the Section, as such, was abolished, and in its place a State Coordinator has been set up in the office of the Director of the Bureau of Safety Regulation, Richard S. Boutelle.

Attendance at this meeting is really the first official action of the State Coordinator, and we are all quite enthused about the possibilities of the ultimate development of state coordination. However, maximum results can be accomplished only through full cooperation on the part of the states, and now that the services of a State Coordinator are available in Washington, we hope that you will use these facilities to the utmost advantage.

During the ensuing three days we will all hear some very interesting speeches and discussions. Out of these, many ideas will develop which, I am sure, will be carried back with you to your respective states. At this time I would like to offer a few suggestions of my own as to how the states may cooperate with the Federal Government and may coordinate their efforts with those of the CAA. Time will not allow a thorough discussion of this field but I will try to touch upon a few of those points which I consider to be of primary importance.

It has been said repeatedly that those states which have functioning aeronautical bodies, such as commissions, or individuals charged with the responsibility of aeronautical promotion and regulation within the state, are in a much better position to take advantage of any federal aid which may be made available. In this regard, an interesting comment might be made on the selection of

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schools for the Civilian Pilot Training Program. For the most part, those states which have well-organized and active aeronautical bodies stood out in the first list published as having a representative group of schools selected. I believe that a similar result would show in the participation by states in any program in which federal aid or federal sponsorship took part. In view of the fact that civilian pilot training is based on a five-year program, it would seem that those states which are more or less inactive at present might benefit by showing more interest in state aeronautical matters. The extent to which such a program will expand is, of course, unknown and the possibilities are unlimited. There has already been some discussion as to the advisability of an extension of ground school training in the secondary schools. Such a plan would necessarily involve a thorough plan of cooperation with the educational departments of the various states, and its merits should be thoroughly considered by official state aeronautical groups when, and if, proposed.

In touching upon the advantages of state organization, I have mentioned the fact — and I want to repeat — that those states which have such bodies are naturally in a much better position to participate in a large scale program of national scope. One of the best examples that can be cited at this time lies in the possibility, however remote or potentially near, of a federal aid program for airports. I do not intend to discuss the Airport Survey as that is to be fully covered by others. The only point which I want to emphasize is that which I stated at Fort Worth last March, and which I have already stated here; namely, that when, as, and if funds for this purpose should be made available by Congress, then those states which are prepared to submit to Washington a well-rounded program for the development of airports within their respective borders — then those states will obviously be the first ones to receive consideration. This will be true because their plans will be received first, if for no other reason. It might even be desirable in some instances to make a study of the existing state legislation with a view to determining whether or not the necessary authority for participation in any kind of a national program exists.

The subject of legislation brings to mind a very serious matter which is receiving more attention every day. I refer now to the zoning of airports and their approaches. I know that a lot of semi-private discussions have been and will be held on this subject at this meeting, and it well deserves the serious thought of everyone here. There seem to be two general possibilities of approaching the zoning problem. One of these is through the enactment of state legislation which would actually set forth in detail the zoning requirements, including height of obstructions, areas to be covered, glide angles and the many and various other items which are included. I would like to say at this point that I do not believe this is the proper approach. The reasons for my belief are that such action would necessarily be more or less all-inclusive and would affect airports within that state by classification if not in their entirety. Any challenge to such a law, if successfully prosecuted, would affect all airports coming under the zoning clause. The industry is changing too rapidly to establish a hard and fast zoning rule that can be changed only by action of the state legislature, and similarly the inclusion of additional airports from time to time would have to be made by the same legal procedure.

The second approach to zoning is one which in my mind is the most feasible and would accomplish the desired results. I believe that the states should concern themselves only with enabling legislation, thereby providing the authority for their political subdivisions to pass necessary zoning ordinances affecting their local airports. This, of course, would require that a recommended uniform ordi-

nance, based on a determination of requirements made by the CAA, be made available by the states to the municipalities concerned. A job of selling would undoubtedly be necessary in many instances but the result would be that the zoning itself would only be made effective by the communities in which the need for such action arose, and any subsequent changes or additions required could be readily accomplished.

In order to provide the necessary enabling legislation which I have just mentioned, it has been suggested that the Uniform Airports Act be amended to include zoning and that such an amendment be prepared and submitted to the Conference of Commissioners on Uniform States Laws and to the American Bar Association for adoption. Further study on this matter will be undertaken by the State Coordinator in the immediate future. I would also like to point out at this time that a very comprehensive study of zoning ordinances and statutes now in existence has recently been made by the Airport Section of the Authority, the results of which are available in Report No. 6, "Survey of State Airport Zoning Legislation."

As time goes on, the need for uniformity in state legislation becomes more apparent. The Uniform Aeronautical Regulatory Acts which appear in the back of Bulletin No. 18 are still adaptable in their present form. The Conference Act of 1935 is a little more adaptable at the present time in that it does not contain references to the Department of Commerce. The N.A.S.A.O. Act of 1934 would have to be revised to meet the Civil Aeronautics Act of 1938, but such changes are minor in character and could be accomplished without a great deal of difficulty. The Uniform Airports Act has been adopted by many states in its present form and I believe the next two years will see the adoption of these uniform statutes by many of those states which are now lacking in legislation, and also by some of the states whose legislation is in need of amending to take care of the transition from the Bureau of Air Commerce to the CAA. This is a matter which is deserving of more attention than has been given during the past year, and I recommend a study of your existing laws with a view to determining just what changes should be made in order to bring them up to date.

During the period from December, 1938, until July 1, 1939, such matters of state coordination as arose were referred to me while I was then serving as Technical Assistant to the Director of Regional Offices. It was possible for me to attend a few meetings in the field, and some very definite assistance was rendered several states by means of correspondence. We found that the best way to accomplish results was for those states contemplating new legislation to submit such material to Washington for comment prior to its introduction in the state legislature. This was done in several cases and the suggestions made were accepted for the most part and some very definite results were achieved. Under the new arrangement it is hoped that the State Coordinator will be able to get into the field much oftener than in the past, and that many matters which may arise can be gone into personally rather than through correspondence.

Before I stop there is one matter which I would like to bring to your attention. This concerns the registration of aircraft and airman certificates by the states. This has been a controversial point for some years, and while I personally have always favored registration and found it to be of a distinct advantage to me in state work, I fully appreciate the hesitancy of other state officials in placing their stamp of approval on this activity. To those of you who now register the certificates I want to point out a very important service you will be rendering those pilots who are registered with you. With the discontinuance of renewal notices from the CAA, the states are now able to

fill in that gap and by means of state registration will be able to notify the pilots and aircraft owners of the expiration dates of their certificates. This may seem to be a minor item but it is one which will be received with approval by the industry within your state.

It was my misfortune to miss the last two meetings of the N.A.S.A.O. at Miami in 1937 and Omaha in 1938. It is my good fortune to attend the New Orleans meeting and I firmly believe that you people who are engaged in matters of aeronautical importance within your respective states are firmly convinced that the CAA has a sincere interest in your problems. Certainly I have never attended an N.A.S.A.O. meeting with such a representation of the Washington group. It is gratifying to me and I know it must be to you to know of this interest, and I fully believe that it is very much your responsibility to see that it is kept alive. This can be done only through full cooperation on the part of all of us and as the means of effecting such cooperation, the office of State Coordinator has been created. Yours truly respectfully tenders his services.

TRAFFIC CONTROL ON THE ACTIVE BUT NON-AIRLINE AIRPORT

By Fred L. Smith*

It is perhaps just as well that I had no opportunity to discuss the exact wording of the topic suggested by your very able President, Mr. Morris of Connecticut, because it gives me an opportunity to remove right at the start one of the commonest misconceptions of airport traffic control and the activities of the Airways Operation Division.

Whether Mr. Morris meant to do so or not, he leaves the impression that there are at least two different kinds of airport traffic control, one for the air carrier airports and another for the non-air carrier airports. May I state right at the beginning that Air Traffic Rules and suggestions to local agencies operating airports take into account the kinds of operation conducted at the airport, based on ground facilities and the equipment of aircraft which use the airport, rather than kinds of operation based upon the service rendered or the activity pursued. This distinction may not seem particularly significant at first. It is made, however, to emphasize the fact that John Jones, private pilot, has just as much right and is just as welcome to use airway facilities as any air carrier or military pilot.

I am sure that you all realize the necessity for guarding against any false notions as to the availability of airway facilities to various classes of operators, notions which may be quite plausible because of the fact that some services have been used almost exclusively to date by air carriers. Actually, if John Jones has the equipment and the proven ability he is less restricted than the air carrier. If I mention air carrier operations, it will be only because such operations are either actually or potentially part of the traffic which must be provided for at any active airport. Really, the only difference air carrier traffic makes in the picture is that such traffic is much more regular than any other with which we are concerned.

Since there is a rather universal lack of understanding of the functions performed by the Airways Operation Division of the Authority, I believe I should explain the Division organization briefly before discussing airport traffic control at a particular kind of airport.

The Airways Operation Division now functions along 3 definite lines, namely, (1) it maintains its far-flung communications network which covers practically every designated airway. This work is the responsibility of the Communications Section of the Division; (2) it exercises airway traffic control over approximately 50% of the civil airway system. The Airway Traffic Control Section, through its 12 centers approves flight plans, issues traffic clearances, and keeps aircraft separated vertically, horizontally, or spaced along the airway at adequate time intervals so as to remove the very real collision hazard which would exist if the airways were used haphazardly when the visibility is restricted. It is important to note that the extent of airway traffic control varies normally with the visibility and while occasionally it may extend to the airports

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it does not ordinarily do so; (3) it oversees airport traffic control, an activity which is carried on by personnel hired by the agencies operating the airports and certificated by the Authority. As airmen, such personnel must observe applicable rules and regulations issued by the Authority. The fact remains, however, that the successful functioning of the Airways Operation Division depends very greatly upon the degree of cooperation furnished by states and local subdivisions in supplying airport traffic control.

What is Airport Traffic Control? What peculiarly local service does it perform? What services can or does it provide which are not available or which can not appropriately be furnished by other agencies? I think we are all interested in the answers to such questions, especially when we take stock of the tremendous growth of regulatory activities and the constant additions being made to ground personnel and equipment in order to expedite aircraft movements.

Keeping in mind what we said about airway traffic control above, airport traffic control might be defined as that traffic control which is necessary to eliminate or reduce the collision hazard naturally present in the vicinity of airports when the traffic is relatively heavy, (a condition which normally exists only during very good weather and with which airway traffic control, if available, is not equipped to cope).

Airport traffic control provides all necessary control of aircraft taxying on the airport as well as the control exercised over aircraft in flight in the immediate vicinity of the airport (within a radius of 3 miles of the center of the airport). A radio-equipped airport traffic control station functioning with radio-equipped aircraft gives pilots almost limitless service as they taxi about the airport. I am sure that we all appreciate the helpfulness of information about other aircraft, trucks, stakes, holes, ruts, soft spots and other actual or potential obstructions to the rapid movement of traffic, especially when such information is being broadcast by an alert tower operator. Incoming pilots can be told where to taxi to get certain services and, what is more important, how to get there without tying up all other traffic.

Airport traffic control provides the order in which planes are to take off whenever any such action is necessary and, of course, it must provide decisions as to whether a plane about to take-off should be held for one which is about to land. Airport traffic control is necessary to arrange a landing sequence if two or more pilots wish to land at approximately the same time. Airport traffic control can save time of pilots equipped to use local control facilities by eliminating circling the airport before landing and by permitting unconventional turns by pilots leaving the airport. It enables the airport manager, through his control tower operators, to exercise effectively any restriction of operations which may be necessary for disciplinary, business, safety or any other reasons. It enables the airport manager to give all pilots using the airport altimeter settings, time checks, radio checks, latest surface winds, weather reports, and information relative to an aircraft or any of its major parts such as the landing gear in case there is anything unusual about its appearance or manner of functioning. It gives the airport manager an opportunity to tell incoming pilots of any last minute changes in the availability of certain portions of the airport which might not be noticed. It enables the airport manager to inform incoming pilots of glider activities, model flying, or any other similar activity which may be taking place on or adjacent to the runway to be used. In short, airport traffic control permits the airport manager to make the greatest possible use of the facilities under his care.

In many respects, the air-traffic control-tower operator serves as an extra pair of eyes for the pilot, particularly when the control tower operator's field of vision includes portions of the airspace which cannot be seen by the pilot. The added safety by the exercise of airport traffic control is therefore very obvious.

In all of the foregoing respects, airport traffic control is purely local. In addition to these services, however, airport traffic control provides services which are not available or which cannot be appropriately furnished by other agencies. For instance, in airway traffic control areas, it is necessary for the airway traffic control center to relay traffic clearances, instructions, and traffic information through the airport control tower, when the airplane is on the airport. This procedure is practically a necessity from a standpoint of complete airway traffic control and yet under the present system federal employees responsible for airway traffic control can only hope that local agencies will find it possible to furnish the facilities which are so necessary to complete the traffic control picture.

Air-traffic control-tower operators relay flight plans, position reports and pilots' reports of unanticipated changes in the weather. Just recently the Weather Bureau sent out a request to airport managers that their control tower operators serve as lookouts for the Weather Bureau to report unexpected changes in the weather which might not be observed immediately by Weather Bureau personnel. The assistance given airway traffic control by control tower operators is a service which could not be performed by any other agency, especially when the airplane is on the airport. At such times the pilot must be tuned to the airport control tower frequency and hence whatever information or instructions airway traffic control has for the pilot must come through the tower. Insofar as the assistance given to the Weather Bureau is concerned, it is obvious that no other personnel are in a position to keep track of changes in the local weather as well as the tower operators.

I think it is quite obvious that airport traffic control begins with the generally applicable rules found in federal Civil Air Regulations governing landing and take-off procedures. These rules, supplemented if necessary by additional local rules, form the basis for traffic control at every airport or landing field. In many instances, these rules provide all the traffic control that is necessary. It is unfortunate, however, that airport traffic is extremely sporadic, and furthermore, that the amount of traffic which can be handled safely varies greatly with weather conditions. I am sure that you all realize the significance of the effect of weather conditions at our major terminals where arrivals and departures at the rate of 50 to 100 an hour in good weather are slowed down to a rate of from 2 to 5 or 6 an hour when instrument flight procedures must be followed. Thus, I am sure that no one will question the statement that because of the likelihood of a collision hazard, whether it result from the presence of a large number of aircraft or a comparatively few operating when the weather is unfavorable, airport traffic control should be available at many points although it may not be exercised continuously or for extended periods during the 24 hours except at a comparatively few places. When we speak of the difference between airport traffic control at a large terminal like Chicago or Newark and active airports at which there is no air carrier traffic, it is obvious that the differences are differences in *degree* rather than *kind* of control. In other words, there is every justification for continuous active control at the large terminal, while at the smaller airport active control may be justified only occasionally.

Airport traffic control at an active airport should provide the following services:

1. Radio communications between the airport and aircraft on the ground on the airport or in the air in the vicinity of the airport.
2. Visual signals, light, flag and panel if necessary, for communication with aircraft not equipped with radio on the airport or in the vicinity of the airport.
3. All the equipment necessary to enable the operator to give the pilots of aircraft information on the wind, direction and velocity, altimeter setting, and, of course, a structure from which an operator can observe traffic so as to be in a position to give pilots correct information or instructions relative to the use of the airport.

Radio is included without qualification because of the fact that while the equipment is rather expensive, the major cost in the use of radio is in the salaries of operators. If the radio is used by someone who is ordinarily occupied at other duties, no additional salaries are involved and hence we can make such a recommendation without feeling that we are proposing an utterly impossible increase in airport costs. It is wiser to encourage the installation of radio even though it may be used by a part time operator rather than to have airport agencies postpone the installation of radio until they feel they can assign operators to airport traffic control duties exclusively. As is true in so many other activities, the value of any one radio set, whether in an airplane or on the ground, depends entirely upon the number of stations with which contacts may be made. The more ground stations with which the pilot can communicate, the more valuable radio equipment is to him and hence to any other pilot who might be a potential user of such equipment.

It is difficult to over emphasize the desirability of encouraging more extensive use of radio, particularly by the non-scheduled civil pilot. If the pilot has radio, he can keep track of the weather as he flies along his course and thus can either avoid bad weather areas or plan his flight with airway traffic control so that it can be coordinated with other aircraft movements. Finally, even though a pilot wants no part of instrument flying, use of radio gives him an informal schooling in instrument flying procedures so that he will be better prepared to follow such procedures at a later date if he chooses to qualify for such operation.

The pilot who does not have radio is always apt to get in trouble with the weather because he is inclined to push ahead to find out for himself just how bad the weather is and consequently he frequently gets into spots where it seems wiser to forge ahead than to turn back. Such operations are hazardous not only to the pilot resorting to such practices but to all other users of the airspace.

It should be noted at this point that we do not discourage airport traffic control by the use of lights and visual signals only, although I am sure we all appreciate the limitations of such a service. We do feel, however, that if funds are available for the salaries of operators assigned to traffic control exclusively, it should be possible to make this service still more worth while by the comparatively modest expenditure necessary for an airport transmitter, and a few receivers. Incidentally, the cost of the radio equipment should not exceed $1,500.00 to $2,000.00, if no fancy work is involved. Here again we have tried to be realistic in making recommendations to local communities and have recommended the installation of equipment which would work and which was relatively inexpensive rather than to encourage high priced installations. In other words, we appreciate the fact that cities and local agencies generally are

in about the same position as individuals. We might like to have Packard automobiles but the fact remains that most of us have to be satisfied with Fords and Chevrolets.

I don't believe that it is necessary to discuss in detail visual signals because, after all, they are relatively simple in construction and operation. The most important consideration is that they be as simple as possible and, of course, absolutely uniform. A misunderstood signal cannot be explained in time to do any good insofar as any particular operation is concerned.

In making recommendations relative to traffic control at different airports, we have tried very seriously to avoid over-selling airports as to the need for traffic control. We believe that air traffic control is somewhat analagous to surface control in many respects. Everyone of us has stormed and fumed about traffic lights set out in the middle of the country, perhaps at some isolated cross-road at which converging traffic can be seen for half a mile on either side and at which there is relatively little traffic, except, perhaps, on Sunday afternoon. Most of us realize that some ambitious salesman sold a county or township on the need of such a light because of some one accident which occurred and which might be duplicated at any time, light or no light. However, even when the occasion for installing such a light is not subject to question, I believe that we all have felt that it would be so much better if the light were operated only when traffic warranted operation or at least only on days or parts of days when the traffic warranted such operation, rather than to have it going day and night throughout the week, retarding traffic when there was no earthly need of the light. Naturally, we hope to avoid similar mistakes with respect to airport traffic control.

I do not want to close this discussion without anticipating what is probably the foremost question in your mind as to airport traffic control, namely, how such an activity should be financed. I think we are all agreed that the assumption of the entire burden by the local agency as is done at present is one of those circumstances which everyone recognizes as unfair but one which has not yet been straightened out. If the federal government operated all the airport traffic control stations, I am sure that no local agency would object from the financial standpoint. However, in going over the questionnaires somewhat reflectively, I could not help but notice that some of the older airport managers seem to sense a result not entirely pleasing to local agencies. "Whoever controls the traffic rules the airport" is a statement whose truth is almost self evident and hence I doubt very much whether cities which have really prided themselves in their local airport development will be willing to turn over the operation of the airports, lock stock and barrel, to the federal government unless the federal government wishes to take over the whole system, land, hangars and all the responsibilities and headaches which go with the construction, maintenance and operation of an airport.

I see no good reason why there should be any argument over a proper sensible division of authority over air traffic when we have managed under our present form of government to arrive at some fair and satisfactory division of authority with respect to so many other activities. The answer, of course, must be provided by the Congress which will undoubtedly rely very largely upon the course of action recommended by the Authority and your organization.

I should, however, like to present briefly a solution suggested by Major Albert Edson of Boston. His suggestion is that a local facility could be operated on very much the same basis as caretaker personnel serving in conjunction with National Guard Air Corps units at 19 different cities at the present time. As

you may know, all the airplanes, armament, radio, and similar equipment used by National Guard units is furnished by the federal government. The caretakers are under the supervision of the local commander of the National Guard or a member of his immediate staff, and while the National Guard commander is responsible to the federal government in many respects, actually in supervising the caretakers, he is functioning as a local civilian or representative of the state at least 6 days out of 7 and hence we have almost a perfect parallel for a setup in a control tower in which federally paid operators might function under an airport manager hired by the city.

I have had ten years experience with the same sort of setup myself and can speak from personal experience as to the smoothness with which such a system works and the fairness of any such plan.

I regret to state that our limited experience with the promotion of airport traffic control has shown that local agencies have not become especially worried about the traffic problem until one or a number of accidents have occurred. It is our hope that in this new field of activity we can encourage the reasonable extension of this service in time to avoid the re-enactment of the history of motor traffic in which very few aids have been installed until the need was proven by a series of accidents. Aircraft accidents are too costly to permit us to follow such a procedure.

A report of the Air Safety Board under date of September 24, covering 117 aircraft accidents, showed that 18 of the accidents were classified as taxying accidents and the note indicated that 18 ground accidents and mishaps were not included.

While we do not know the exact nature of any of these accidents, I want you to remember the figures because occasionally we find people who attempt to minimize the importance of airport traffic control because they feel that traffic is not yet a problem. Actually, it is one of the major causes of accidents. It does not take much imagination, therefore, to visualize its importance in the near future as air carrier, military and private flying continue to expand.

Airport traffic control is worthwhile even if considered only from the standpoint of its convenience. In contributing to the prevention of accidents it performs a service whose value cannot be measured in dollars and cents. It should be exercised whenever necessary.

In conclusion I should like to present some figures taken from the traffic control questionnaires filled out in connection with the airport survey.

For purposes of analysis, we separated the airports into 5 groups, Group A consisting of control airports at which local traffic control is exercised, Group B, control airports without local traffic control, Group C, all other airports with local traffic control, Group D, airports not included in A, B and C but at which scheduled stops were made for air mail, and Group E, all other ariports or landing fields from which we received answers.

The answer to question 7, which was "If you do not exercise airport traffic control, would you set up airport traffic control at your airport if you could have it?" was answered affirmatively by all but 2 of the control airports in Group B and by approximately 2/3's of the airports in Groups D and E. It appears that this question was answered very honestly and that there was no particular misunderstanding in view of the fact that by far the major number of answers from Groups D and E were to the effect that control was merely desirable or necessary only part of the time.

80 per cent of those who said they would not install airport traffic control gave us their reason that they did not consider traffic control necessary at their

particular airports.

It should be noted again that approximately 50 per cent of the airports from which we received questionnaires were not even air mail stops and hence a considerable number of airports and landing fields were included at which there was very little traffic.

The answers to question 8 are of basic significance. We asked whether airport traffic control was considered a local function, a federal function, or one which should be part federal and part local. Opinion was rather evenly divided in some respects. In attempting to arrive at some conclusions, I compared the number of those who considered airport traffic control federal and local plus those who considered it purely local, to those who considered it altogether federal. It is interesting to note that replies from Group C (airports at which control had been established without any urging from us) only 2 of the 10 stated that airport control was a federal function. Even in Group B, practically one-half indicated there should be local or part local participation. Of Groups A, B and C 57 per cent voted for local or federal plus local. Note the definite stand for local participation at airports at which control is now exercised and the gradually increasing percentages for federal operation where the question is more academic than real. Perhaps the most significant result, however is that 328 of 368, or practically 90 per cent, consider airport traffic control either partially or entirely a federal function.

SUMMARY OF TRAFFIC CONTROL QUESTIONNAIRE (1938)

	A	B	C	D	D	E	E	Total A-B-C	ALL
6. Is your airport served by a federal radio range designed to direct YES	22	29	5	74		21		56	151
aircraft to it?.....NO	5	2	5		56		150	12	218
7. If you do not exercise airport traffic control, would you set up airport traffic control at your airport if YES		29		50	42	15	90	29	226
you could have it?.....NO		2		20	16	6	57	2	101
a. If so, do you consider airport traffic control at your airport—									
Merely desirable		9		10	11	6	52	9	88
Necessary part of the time.....		12		31	23	5	31	12	102
Necessary at all times.....		7		9	8	4	7	7	35
b. If not, would you object because you believe that airport traffic control is not necessary at your particular airport, or.....		2		11	16	6	48	2	83
You consider airport traffic control unnecessary at any airport, or....							3		3
You think the federal government should exercise whatever airport traffic control is necessary.....				8			5		13
8. Do you consider airport traffic control a local function, or.....	8	4	4	4	3	2	14	16	39
A federal function, or.....	11	16	2	47	29	12	76	29	193
One which should be part federal and part local?	8	11	4	23	22	7	60	23	135
Per cent federal and local plus local....	59	48	80	36	46	43	49	57	47
Per cent federal and local plus federal..	70	87	60	95	94	95	91	76	89

	A	B	C	D	D	E	E	Total A-B-C	ALL
c. If you consider it a federal function, do you think—									
There should be no airport traffic control except where the federal government puts it in operation, or	1	11	2	33		42		14	89
That any city should be permitted to exercise airport traffic control with certified operators if the federal government did not choose to operate a local station?.....	9	4		30		32		13	75
d. If you believe airport traffic control should be part local and part federal do you think that—									
Only local men should handle non-interstate traffic when con- YES	4	5	2	17		32		11	60
tact flight is possible.....NO		2	1	4		8		3	15
At most airports a local man on duty during the daytime would be all that was YES	4	5	2	20		38		11	69
necessary .....NO		2	1	1		2		3	3
That the major job is FEDERAL	3	4	1	11		13		8	32
LOCAL	1	2	2	10		21		5	36

AIRPORT QUESTIONS 1939

By A. B. McMULLEN*

One year has passed since I had the opportunity to speak before you at your last annual convention on the subject of airports. It has been a year of much activity on the part of everyone in aviation including the Civil Aeronautics Authority. These activities have been fruitful. So fruitful, in fact, that increases in all kinds of flying this year and vividly in prospect for next year have developed a situation almost entirely new. So that this year, instead of again *telling* you more about airport and airway planning I have decided to ask you some questions.

State Initiative

My principal question to you at this time, as one of your old colleagues, is, what have the States done to keep up with the present rate of progress in aviation and to match the activities and expenditures of the Federal Government on airports?

Let us assume, for instance, that a possible future airport program financed partially by the Government should be patterned to some degree after the Public Roads Statute. How many of the 48 States would be in a legal position to accept financial assistance from the Federal Government? How many States have aeronautical commissions or similar organizations to plan, direct, and protect the States' interests from an aeronautical standpoint, and to function cooperatively with the U. S. Government. (See recommendations 10-11-12, CAA Airport Survey Report to Congress, March 24, 1939.)

May I outline briefly what we in the CAA have attempted to do to assist you in solving not only this problem but many other problems which I would like to call to your attention. I am speaking only for the Airport Section in this instance and not of the work done by other divisions, particularly by Mr. Elwood Cole, State Coordinator for the CAA who will speak to you later on about his functions. Reducing to a minimum the many details involved let me itemize some of the studies now being conducted by the Airport Section.

A study has been initiated to determine which States have satisfactory enabling legislation and what action is necessary in others to permit participation in a Federal airport program. It is evident that the necessary state machinery should be set up and ready to go ahead on time and that progressive aeronautical policies should be studied and adopted in advance. This is a matter which should be receiving the study and consideration of everyone interested in the airport problem—and particularly of every State Aviation Official.

National and State Plans

We are still working hard with very limited personnel in the CAA on a national airport plan. At the start of the Airport Survey conducted during the latter part of 1938, all States were supplied with a guide for the preparation of a state plan. Since then Airport Section field personnel have submitted to

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most of you, or other State officials, in an informative way suggested state plans of airport location and distribution. We are still waiting for an expression from the majority of the States as to what they consider adequate airport distribution. In most cases the state plan submitted to us covered only the major terminals. In view of the urgent need of preparing this data, in the face of the very imminent need for new facilities due to increased flying, we are now forced to get this information through the cooperation of the National Resources Planning Board and through State Planning Officials. You will realize the seriousness of this matter when, in some instances, such plans are prepared by officials entirely unfamiliar with airports and other aviation problems. Are you State Aviation Officials coordinating your activities with the State Planning Boards in your respective States?

Zoning

What is being done in your State to eliminate obstructions and protect approaches to airports? Some progress has been made along these lines in a few States during the 1939 legislative sessions which I know George Logan, your legal counsel, will cover in his report. The problem of zoning has been of considerable concern to us in the past and extensive missionary work has been done along this line through Airport Section field personnel and its Legal Unit under the direction of John M. Hunter. I need not emphasize the importance of such legislation, particularly in view of the early installations of instrument approach systems, the probable need of early expansion of existing airport facilities and the protection of these new investments which would be wasted without safe and adequate approaches. Tentative standards prepared by the Airport Section for the location of overhead power lines have prevented in many cases the erection of transmission lines which would have been a hazard to aerial navigation. For the benefit of those who are not familiar with the background on this work I shall briefly explain its early stages of progress. The Federal Government was spending money for airports as well as on power line installations and our objective was to coordinate and control the construction of such facilities where they might conflict. After several conferences with representatives of the offices within the Authority interested in the matter, a preliminary draft of standards for the location of overhead transmission lines in the vicinity of airports and radio range stations was prepared. A conference of 20 Federal agencies concerned with the installation of overhead transmission lines was then called by the Authority for the purpose of discussing these proposed standards and determining to what extent such agencies would cooperate in conforming to standards of this Authority in future installation of transmission lines. This conference was held on January 26, 1939, with extremely gratifying results. Not only were the various Federal agencies glad to cooperate in this matter but there was considerable interest evinced by the many representatives of public utilities who were present. As a result, the proposed standards are now followed by the three Federal agencies directly engaged in the most extensive programs of power line installation, the Rural Electrification Administration, the Bureau of Reclamation of the Department of Interior, and the Tennessee Valley Authority, while the Federal Power Commission refers all cases over which it has jurisdiction to this Authority for recommendations and advice. As a matter of fact, the REA has organized an airport section specifically for the purpose of coordinating this type of work, and has recently taken the initiative in obstruction-lighting its cross country

high tension lines. In addition, as soon as the present standards are revised in accordance with the many helpful suggestions received at, and since, the conference of January 26, and in accordance with a study of airplane performance recently completed by the Airport and Aircraft Sections of the Technical Development Division, on the basis of motion picture flight tests, it is planned to request formation of a committee of representatives of the public utility interests in accordance with a suggestion made by them at the conference. As a result of conferences between such a committee and representatives of this Authority and other Federal agencies, it is hoped that a mutually agreeable arrangement can be made for installation of overhead transmission lines in the vicinity of airports by private as well as public interests. These standards although not mandatory have had an extremely desirable effect on public and private service agencies. We have received numerous calls from such agencies or firms desirous to have their long range planning programs conform with these standards.

Many questions pertaining to the location of power lines should come to your attention before they reach Washington and you can assist materially in many cases over which the Federal Government has no jurisdiction.

Airport Power Supply

Black-outs due to power supply failures such as recently occurred at Chicago and Buffalo airports, cannot be tolerated if we are striving for 100% scheduled operations. Standby equipment at either the city's power plants or at airports is important. The CAA is interested in securing detailed information regarding the emergency power supply at terminal airports and we believe that all State Aviation Officials should become familiar with the power supply at all airports within their respective States.

Airport Lighting

The CAA has set up standards for airport lighting equipment after consultation with all interested industries and an attempt is now being made to simplify the procurement of lighting equipment under approved type or rating certificates.

Airport Planning and Size

The problem of present and future traffic control as far as airport sizes, layouts, and building designs is concerned has been a vital question confronting all of us. The CAA has tabulated traffic densities, etc., and prepared tentative layouts of landing areas, buildings, and control towers, but we often find it difficult to convince the local communities of the necessity of preparing a master airport plan at the present time. Should we not be concentrating on what may be confronting us 5, 10, or 15 years from now when discussing or planning airports? None of us may be psychic or crystal gazers, but there should be a way to approach an approximate answer to such questions. Other industries are doing it, why not our own?

As already mentioned in connection with approach standards, a study of the correlation of aircraft take-off and landing characteristics with airport size, involving some 20,000 man hours expended over a period of two and one-half years, has recently been completed by the Aircraft Section of the Technical Development Division, and a 250 page report is now in the process of being printed.

The purpose of this study is to determine airport dimensions that safely will accommodate the different types of aircraft. These airport dimensions should remain within reasonable geographical and financial limits and should be determined so that no increase in requirements will be necessary for many years to come. As far as possible, airport and runway dimensions should be founded upon factual data rather than upon personal opinion and theory. Accordingly, this study is based mainly upon photographic records of day-in and day-out operations of a number of representative airplanes, obtained on airports at various altitudes.

In addition to these performance data, this study includes a large number of accident records and meteorological observations.

The study of accident records seems to lead to the establishment of the following conclusions:

(a) Runways should be long enough to permit aircraft to be brought safely to a stop in the event of an engine failure occurring during the take-off up to the point where the wheels are just leaving the ground.

(b) The cleared areas on either side of the runways should be wide enough to provide reasonably smooth surfaces on which the aircraft can come to rest, should some unforseen contingency cause them to swerve from their original take-off or landing directions.

(c) Obstacles should not project up into the flight paths.

A study of meteorological observations has led to general conclusions concerning possible airport temperature and barometric pressure conditions that will be encountered in actual operation. It appears that, at any airport, allowances should be made for a density altitude several thousand feet greater than the geographical altitude of that airport to provide for temperatures above normal. All observed data are corrected to zero wind velocity and to specification gross weight of the aircraft concerned.

These studies have resulted in the attainment of two broad objectives:

1. The establishment and application of a basic and practical method for correlating the take-off and landing characteristics of any airplane with any airport at any altitude so as to insure safe operations.
2. The determination of definite dimensional requirements for four classes of airports at any altitude.

The grouping of airport requirements into four classifications, as mentioned above, is based upon the types of airplanes that can be safely accommodated. These are as follows:

Class I: Low powered private owner type.

Class II: Medium powered private owner type.

Class III: Higher powered private owner type and smaller airline type.

Class IV: The largest of airline and military aircraft.

Conclusions as concern dimensional requirements for the four classes of airports are presented in two sets of curves. The first shows runway length requirements for each class of airport up to 10,000 feet elevation. The second shows obstacle zoning ratio requirements for each class of airport and at any altitude up to 10,000 feet. The obstacle zoning ratio is obtained by dividing the distance from the obstacle to the near end of the runway by the height of the obstacle.

Data from which the total width of the runway plus the cleared areas on either side of the runway may be determined are far from adequate. They indicate, however, that for each class of airport an effort should be made to

provide the following minimum widths:

Class I (At any altitude)..... 300 feet
Class II (At any altitude)..... 600 feet
Class III (At any altitude)..... 900 feet
Class IV (At any altitude).....1200 feet

As indicated by this study, runway length and obstacle zoning ratio requirements at *SEA LEVEL* are as follows:

Airport Class	*Runway Length*	*Obstacle Zoning Ratio*
I	1800 feet	13
II	2800 feet	18
III	3800 feet	23
IV	4800 feet	28

At any airport at any altitude, radio instrument landing systems require an obstacle zoning ratio of 43.

The above conclusions represent our interpretation of the factual data available and are not the final regulations. They will, however, be incorporated in our final airport standards unless shown to be incorrect. Your advice and recommendations will be welcomed.

Seaplane Bases

The seaplane landing float program, the objective of which is the establishment of at least docking facilities on all waters that may be used by this type of aircraft, is progressing satisfactorily through the splendid cooperation of the NYA. The latest reports indicate the following results during the past eight months:

Number of approved locations where installations can be made....119
Number of installations definitely under construction..... 25
Number of installations actually in service..... 19

The C.A.A. has depended upon your cooperation to make this program a success. With your continued cooperation we can make it an outstanding example of cooperation between States and Federal agencies. We already have taken steps to chart existing water areas in the United States suitable for seaplane operations not listed on existing maps. It is a difficult task due to the absence of complete information in Washington. We are compelled to obtain much of this data directly from the States. Complete information is essential to determine the suitability of inland water areas for the operation of seaplane equipment.

Have the States given any thought to the effects of the Civilian Pilot Training Program or to the rapidly increasing number of private pilots? Are the present airports in your respective states adequate to take care of 40,000 pilots, a goal anticipated within a short space of time?

Our attempts to solve all of these and many other problems would be ineffective without the cooperation of the States.

Speaking of the National airport problem and all its technical and legal ramifications, have you ever considered how far reaching, how important our problem is? There can be no private flying activity unless we have airports and landing areas, no scheduled operations under certificates of convenience and necessity unless there are airports serving such routes. The wisdom of the late General Westover's statement to the press that "a national system of commercial airports is the backbone of national air defense" has been proven by experience in the present European war.

The airport problem is international in scope. This very day representatives of the Airport Section are assisting in the planning of airports in Alaska and the Hawaiian Islands, in the planning of transoceanic seaplane bases and terminals in the Pacific Isles and elsewhere. We have answered requests from nations all over the world for recommendations as to airport sizes, drainage, paving, and lighting specifications. Your Association and many of its members have been of great help to the C.A.A. in the past and we need the advice and cooperation of your organization in the future. We are all interested in solving, in the most efficient manner, the airport and other problems which confront us. We are also desirous of seeing America maintain world leadership in aviation. Men with imagination and vision—men such as yourselves—have made aviation what it is today, and in order to attain our mutual objectives in the future the C.A.A. and the N.A.S.A.O. must continue to work hand in hand.

AIR YOUTH OF AMERICA

By Ernest Gamache,*

The contemplated program for AIR YOUTH OF AMERICA has recently been announced. Many of you doubtless heard Lowell Thomas, Dr. Luther Gulick, Jackie Cochran, and Winthrop Rockefeller explain what we propose to do and may therefore be somewhat familiar with program details. Your president has asked if I might elaborate and indicate how members of your association could assist in spreading the effectiveness of our proposed service.

Before getting into that, a thumbnail background on why we ventured into this activity might be helpful in explaining current developments.

Last fall—just about a year ago—Winthrop Rockefeller, having had his interest aroused by Frank Hawks in the leisure-time possibilities of a program in junior aviation, called together a small group to discuss what might be done to further Frank's ideas. All agreed that before anything was undertaken, we should first determine what was now being done, who was doing it, and what forms their interest took. A survey was thus undertaken.

For over a year, we have gathered and analyzed reports and program materials from all sections of the country. We have found not only what Capt. Hawks claimed was true, but that it went much further. Youth not only has an intense interest in aviation, but is extremely active. In many sections, this has developed into a valued form of group activity. This is not news to you.

Our estimate of participation is that over 2,000,000 boys and girls are active in some phase of junior aviation. You gentlemen know all too well what they are doing in your state and doubtless in many others. They are not, as a rule, shrinking violets, and do not hesitate to make their wishes known.

Let me, rather than dwell on that phase, take but a moment to indicate what is lacking and as a result, we believe, holding progress back.

We find, in most sections, a hit-or-miss development which has grown without thought or plan, attracts large numbers of youth, but suffers the loss of probably a larger number by reason of their inability to obtain needed mature guidance and assistance. The activity for the most part is local, is sporadic, and little has been done to pull it together. In few states has there been any attempt on the part of schools to cultivate this intense interest and guide it into constructive educational channels.

The average boy or girl, more eager, more receptive than an older person, finds in aviation a source of glamour and fascination probably unmatched by any other interest today in its intensity. Young people want to know more about flyers and flying and the reasons why planes fly. They look to their elders—their teachers and parents to tell them.

They bring their eagerness into the schoolroom, but all too often they are stopped right there. There just isn't any information about aerodynamics and flying in the textbooks or in the classroom. Too often will the teacher lead them away from the subject, for the youth are getting to know more about

* Executive Director, Air Youth of America, 30 Rockefeller Plaza, New York City.

aviation than their teachers. I feel sure most of you have observed or heard about such situations.

I could continue to tell you many other of our survey findings, but as my time is short and we plan to review in detail all phases of the survey in our current publications—copies of which will be sent you—let me proceed to an explanation of the program.

We believe that the most effective way youth can learn about aviation, especially as to its fundamentals, is by becoming immersed in it. One phase of the immersion is in the building and flying of models. Another, in the study of text material presented in a way the youthful mind can grasp. Another, and probably the most important, competent guidance by informed leadership.

Our program guidance service will be directed to the leader, to the teacher, to the one in charge of a youth group. We feel that if the leaders are properly cultivated and supplied with carefully planned program materials, the needs will be more adequately met than if our approach were to the individual boy or girl. Teachers and students, club leaders and participants will welcome, we believe, an authoritative source of information.

How do we propose to accomplish this? In several ways, all of which add up to a rounded service of leader guidance. A clearing house for authentic information is sorely needed—a source to which leader or group, teacher or parent, sponsor or contemplate sponsor, can turn for assistance. A monthly bulletin is being developed for wide circulation among interested groups to answer this need. It will be a clearing house for advance information and present the leading thought on subjects of current interest.

Then, a series of booklets and handbooks, again directed to group leaders and serving to guide them along the path of group activity. Such pieces as:

How to form and run a club
How to build model aircraft
How to develop and run a contest, etc.

are now contemplated. From time to time, institutional booklets will be prepared on aeronautic subjects in which youth is interested, such as meteorology, navigation, radio, engines. Our aims is to orient youth in the science of flight.

Now as to model building and flying. It is a valuable leisure-time activity in which youth, if properly guided, derive a wealth of benefits—all of which may be summed up in what educators like to call "character building." Here we feel what youth needs is directional assistance. He has the interest and enthusiasm to accomplish. He needs to be guided.

What usually happens when a boy first becomes interested in models? He will go to a store, either alone or with his fond parent, and will be sold by a salesman who knows little about model building, a kit far too expensive and complicated for him to build. After the boy has tried his level best to put it together, he turns to his father, uncles or friends for aid. Finally, after hours of discouraging effort, he gives up in despair, convinced that model building is too difficult and not for him. Aviation has lost a potential supporter.

Our approach is to make a graded series of four or five kits available through established dealers—and to educate the beginner to start with kit No. 1 and work up progressively. By the time he has completed the series, he will be ready to build from plans which will be supplied to groups, again on a progressive basis.

One of the current needs which must be met, if today's educational conditions are to be improved, is the training of new leaders. Boys who are now our

expert builders will be able to assist considerably. But leaders who are already established in youth organizations and schools should have a background of aeronautic fundamentals to effectively meet the demands placed on them by our air-minded youth. It is our plan to develop training institutes through which training will be given to interested potential leaders.

Other educational activity will be developed as the program expands and more participation results. We have in mind the development of a weekly radio program, the production of educational movies, the working into our primary and secondary school texts more aeronautic factual material. The conveyor use of aviation in our established school courses is great, but little advantage is being taken of it today. Mathematics, science, physics, history and geography could be made the more interesting. A service of vocational guidance will prove most helpful, we feel, to guide youth in the possibilities of employment. These and other phases will be developed as needs arise.

Our plan to make these services available when ready has been developed. They will be offered first to established youth organizations now working through recognized leaders. Such groups as Boy Scouts, Y. M. C. A's., Boys' Clubs, Park & Recreation Depts., Junior Chambers of Commerce and many others, are examples. The program will be made to work smoothly with these groups before the second step is taken—that of introducing it to secondary schools. It is our aim here to have aviation clubs formed in all schools interested, under the guidance of teachers who can develop the program. This phase is so large, as those of you who have dipped into it know, that we are not anxious to get too deeply into it at the start.

As a third stage, we plan to form and service new groups who will become affiliated with Air Youth. Such groups will have adult sponsorship and leadership. They will follow the pattern of presently established model clubs and will be very active in contest participation.

For all these services, nominal fees will be charged. It is the aim of our Committee to make the work eventually self-supporting.

The part which members of your association can play in the development of this program can and should be a large one. You are in a strategic position to stimulate and assist in making this youth activity more widespread. In established youth groups, in schools and in new groups, your on-the-spot counsel and advice can be an important factor for success. Many of our high schools now offer aviation courses, either on a vocational or industrial arts basis. Every city in which such courses are given should have an Advisory Board made up of experienced lay and technical men. They should take on the responsibility of seeing that a sound program is developed in the light of current conditions in the field. You could exert a strong practical influence on this Board to influence public school training.

Those of you who have assisted schools in your state know they welcome suggestions and desire assistance. They need help in getting used equipment—airplanes, engines, instruments—and they would like to look to you for a helping hand from time to time, even though their activity may be strictly avocational.

If assistance is desired in the vocational field, you should keep certain facts in mind. We all know that high standards exist in the industry. Boys who hope to get jobs must have real skill as well as desirable personality and character traits. They should be chosen carefully and the unfit weeded out. Aviation classes should not be a dumping ground for dull boys who have nothing more to offer than an interest in aviation. Such boys have nothing but disappointment ahead, so far as getting into aviation is concerned.

The aim of courses in high school should not be solely to train boys for aviation. They should be encouraged to think of aviation as a leisure-time activity, one in which they might participate by later belonging to a flying club or assisting in airport development. Our high schools should act as feeders to flying clubs. Youth who are air-minded in school are likely to carry their interest into later life.

Before encouraging schools to develop vocational courses, local conditions should be carefully studied. Courses should be adapted to fit these conditions. It would be pointless, for instance, to encourage courses in mechanics in Augusta, Maine, whereas in Buffalo, Baltimore, Patterson, Hartford, and Southern California, it would be equally pointless not to do so. We must recognize the limitations of aviation as well as its opportunities.

A National Council, the governing body for Air Youth, is now being formed under the temporary chairmanship of Winthrop Rockefeller. Such persons as Sanford Bates, Thomas Beck, Col. Henry Breckinridge, Jacqueline Cochran, Bill Enyart, Lester Gardner, Dr. George Lewis, Carl Norcross, Dr. John Studebaker, Lowell Thomas, Edward Warner, Dr. James West and others, have agreed to serve. Others will be added to represent all interests in the field.

Air Youth expects to have its program service ready by December 1st. We shall keep you currently informed of progress through frequent mailing and shall welcome your suggestions. We want to work closely with you and need your help in making our youth more soundly air-minded.

FEDERAL

CIVIL AERONAUTICS AUTHORITY

Washington, D. C.

Codification of Civil Aeronautics Authority Rules and Regulations.

The Civil Aeronautics Authority has adopted a new system of identifying and indexing its economic and general regulations. The Civil Air Regulations are not affected by the change, but new numbers have been assigned to the rules of practice and all other permanent regulations. The change was made at the suggestion of the Federal Register, which is in charge of the codification of the regulations of "general applicability and legal effect" adopted by agencies of the Federal Government. Before putting the change into effect the Authority invited the suggestions and criticisms of the air carriers and others, and received replies favorable to the change.

Under the new system, the Authority's regulations will be divided into two chapters, Chapter I and Chapter II. Each chapter is divided into part numbers and each part number is subdivided into sections.

Chapter I will consist of the Civil Air Regulations. No change has been made in the part and section numbers of the Civil Air Regulations now in force. This chapter consists of Parts 0 to 199, only 30 of which have, up to now, been assigned to specific subjects. The remaining part numbers are available if necessary for future expansion.

Chapter II consists of the rules of practice under Title IV and section 1002 (d) to (i) of the Act, and the economic and general regulations issued by the Authority. This chapter consists of Parts 200 to 299. Only 22 of these part numbers have been assigned to particular subject matters, the remainder being available for future expansion.

A list of part numbers and section numbers already assigned to the rules of practice and economic and general regulations, showing the former number of the rule or regulation, is attached. There is also attached a list showing part numbers assigned to various subjects within certain of the economic and general regulatory powers of the Authority.

PAUL J. FRIZZELL,
Secretary

October 9, 1939

CHAPTER II—ECONOMIC REGULATIONS

The existing rules, regulations and orders of the Civil Aeronautics Authority which are of an economic or general nature and have general applicability and legal effect are as follows:—

Part 202—Accounts and Reports

Section 202.1 Forms of Financial and Statistical Reports of Air Carriers. (Formerly Reg. 407-A-1, adopted October 10, 1938.)

Section 202.2 Forms of Accounts of Air Carriers. (Formerly Reg. 407-A-1, adopted October 10, 1938.)

Part 208—Mail Transportation and Service

Section 208.1 Review of Orders of Postmaster General Under Section 405(e) of the Act. (Formerly Reg. 405-E-1, adopted August 25, 1939.)

Section 208.2 Filing of Schedules and Changes Therein By Air Carriers under Section 405(e) of the Act. (Formerly Reg. 405-E-2, adopted August 25, 1939.)

Part 216—Rates for Transportation of Mail

Section 216.1 Petitions for Determination of Rates of Compensation for Transportation of Mail. (Formerly Reg. 406-A-1, adopted October 4, 1938.)

Part 224—Tariffs

Section 224.1 Filing, Posting and Publishing of Tariffs by Air Carriers and Foreign Air Carriers. (Formerly Reg. 403-A-1, adopted September 16, 1938.)

Section 224.2 Transportation Furnished Under Trade Agreements. (Formerly Reg. 403-B-3, adopted June 16, 1939.)

Part 228—Free and Reduced Rate Transportation

Section 228.1 Free Travel for Postal Employees. (Formerly Reg. 405-M-1, adopted September 2, 1938, as amended November 4, 1938.)

Section 228.2 Free or Reduced Rate Transportation. (Formerly Reg. 403-B-1, adopted October 31, 1938.)

Section 228.3 Access to Aircraft by Duly Qualified Inspectors of the Civil Aeronautics Authority. (Formerly Reg. 605-B-1, adopted December 16, 1938, as amended February 17, 1939 and May 9, 1939.)

Part 238—Certificate of Public Convenience and Necessity

Section 238.1 Applications for Certificates of Convenience and Necessity. (Formerly Reg. 401-B-1, adopted August 20, 1938, as amended September 16, 1938 and October 10, 1938.)

Section 238.2 Exemption of Alaskan Mail Carriers from Certain Requirements of Regulation 401-B-1. (Formerly Reg. 401-B-2, adopted October 21, 1938.)

Section 238.3 Terms, Conditions and Limitations of Certificates of Public Convenience and Necessity Issued Under Section 401 of the Act. (Formerly Reg. 401-F-1, adopted February 24, 1939, as amended April 28, 1939.)

Section 238.4 Terms, Conditions and Limitations of Certificates of Public Convenience and Necessity Issued Under Section 401 of the Act Authorizing Foreign Air Transportation. (Formerly Reg. 401-F-2, adopted May 17, 1939.)

Section 238.5 Service of "Notice of Non-Stop Service" or "Airport Notice." (Formerly Reg. 401-F-3, adopted May 19, 1939.)

Section 238.6 Temporary Suspensions of Service Under Certificate of Public Convenience and Necessity Authorizing Interstate Air Transportation. (Formerly Reg. 401-K-1, adopted July 21, 1939.)

Part 241—Permits for Foreign Air Carriers

Section 241.1 Applications for Foreign Air Carrier Permits (Grandfather clause). (Formerly Reg. 402-D-1, adopted September 16, 1938.)

Part 248—Interlocking Directors and Officers

Section 248.1 Approvals of Interlocking Relationships. (Formerly Reg. 409-A-1, adopted December 30, 1938, as amended January 20, 1939.)

Part 251—Operating Agreements

Section 251.1 Filing of Pooling and Other Agreements. (Formerly Reg. 412-A-1, adopted July 14, 1939.)

Part 285—Rules of Practice

Section 285.1 Rules of Practice Under Title IV and Section 1002(d) to (i) of the Civil Aeronautics Act of 1938. (Formerly Rules of Practice, adopted November 14, 1938, as amended April 15, 1939 and May 9, 1939.)

Part 287—Procedure, Evidence and Definitions

Section 287.1 Definitions of Terms Used in Rules, Regulations and Orders of the Authority. (Formerly Reg. 205-A-1, adopted November 16, 1938.)

Section 287.2 Non-Disclosure of Information Obtained by Representatives of the Authority in the Course of Examinations, Studies and Investigations. (Formerly Reg. 205-A-2, adopted November 16, 1938, as amended September 26, 1939.)

Part 292—Exemptions and Classifications

Section 292.1 Temporarily Exempting Non-Scheduled Operators from Certain Provisions of Title IV of the Civil Aeronautics Act of 1938. (Formerly Reg. 400-1, adopted October 18, 1938, as amended December 7, 1938.)

ECONOMIC REGULATIONS

The index of existing and future rules, regulations, and orders of the Civil Aeronautics Authority which are of an economic or general nature and have general applicability and legal effect, is as follows:

Part 202. Accounts, Records and Reports.

Part 208. Mail Transportation and Service.

Part 216. Rates for Transportation of Mail.

Part 221. Rates, Fares, and Charges for Transportation of Persons and Property.
Part 224. Tariffs.
Part 228. Free and Reduced Rate Transportation.
Part 230. Through Service.
Part 232. Discriminations and Preferences.
Part 235. Joint Boards (Other Common Carriers).
Part 238. Certificates of Public Convenience and Necessity.
Part 241. Permits for Foreign Air Carriers.
Part 243. Acquisitions of Control.
Part 246. Consolidation and Mergers.
Part 248. Interlocking Directors and Officers.
Part 251. Operating Agreements.
Part 254. Loans and Financial Aid.
Part 257. Labor.
Part 280. Forms and Applications.
Part 285. Rules of Practice.
Part 287. Procedure, Evidence and Definitions.
Part 290. Penalties.
Part 292. Classifications and Exemptions.

Dated September 28, 1939.

PAUL J. FRIZZELL,
Secretary.

CIVIL AERONAUTICS AUTHORITY

Dockets Nos. 278, 282, 284 and 302

AMENDMENTS TO CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

American Airlines, Inc.
Eastern Air Lines, Inc.
Transcontinental & Western Air, Inc.
United Air Lines Transport Corporation

In the matter of the application of American Airlines, Inc., Eastern Air Lines, Inc., Transcontinental & Western Air, Inc., and United Air Lines Transport Corporation for amendments to certain certificates of public convenience and necessity under section 401 of the Civil Aeronautics Act of 1938, relative to New York, N. Y., and Newark, N. J.

Decided November 7, 1939.

Applicants found entitled to amendments of certificates of public convenience and necessity so as to include the points Newark, N. J., and New York, N. Y., as co-terminals on Routes Nos. 7 and 18 operated by American Airlines, Inc., Routes Nos. 5 and 6 operated by Eastern Air Lines, Inc., Route No. 2, and the route from Newark, N. J., to Kansas City, Mo., via Chicago, Ill., operated by Transcontinental & Western Air, Inc., and Route No. 1 operated by United Air Lines Transport Corporation.

Applicants found entitled to use North Beach Airport for the purpose of serving the point New York, N. Y., provided the necessary air carrier operating

certificates with respect to such use are obtained prior thereto.

H. O. Hale, for American Airlines, Inc.

Gerald B. Brophy and *John T. Lorch,* for Transcontinental & Western Air, Inc., and Eastern Air Lines, Inc.

Paul M. Godehn, for United Air Lines Transport Corporation.

John S. Wynne, for Newark, N. J., Intervener.

Frederick V. Bryan, for New York, N. Y., Intervener.*

L. Welch Pogue and *George C. Neal,* for the Civil Aeronautics Authority.

OPINION

BY THE AUTHORITY:

American Airlines, Inc. (hereinafter referred to as "American"), by application filed July 18, 1939, Eastern Air Lines, Inc. (hereinafter referred to as "Eastern"), by application filed September 11, 1939, Transcontinental & Western Air, Inc. (hereinafter referred to as "TWA"), by application filed July 15, 1939, and United Air Lines Transport Corporation (hereinafter referred to as "United"), by application filed July 14, 1939, seek to amend certain of their certificates of public convenience and necessity under section 401 of the Civil Aeronautics Act of 1938 (hereinafter referred to as the "Act"). American seeks to include New York, N. Y., as an additional point to be served on Routes Nos. 7 and 18. Eastern requests amendments to its certificates naming New York, N. Y., as a terminal point, and changing the designation of Newark, N. J., from that of a terminal point to that of an intermediate point on Routes Nos. 5 and 6. TWA requests amendments to its certificates naming New York, N. Y., as a terminal point and changing the designation of Newark, N. J., from that of a terminal point to that of an intermediate point on Route No. 2, and the route from Newark, N. J., to Kansas City, Mo., via Chicago, Ill. United requests an amendment to its certificate naming New York, N. Y., as a terminal point and changing the designation of Newark, N. J., from that of a terminal point to that of an intermediate point on Route No. 1.

By an order of the authority dated August 18, 1939, the applications of American, TWA, and United were consolidated into one proceeding. The order provided that any other application which might be filed with the Authority after the date thereof and on or before the date of the hearing for an amendment to an existing certificate authorizing air transportation to or from New York, N. Y., would be heard in said proceeding upon the further order of the Authority; and pursuant to this provision the application of Eastern, filed on September 11, 1939, was consolidated for hearing with the other applications by the Authority's order entered on that date.

By a further order of the Authority dated September 6, 1939, all questions relating to the airports to be used by each applicant in serving the points New York, N. Y., and Newark, N. J., in the event that the above applications should be granted, were included as matters for determination in this proceeding.

The applications were duly filed and notice thereof was given to the public and to the air carriers included in a list issued by the Authority, in accordance with the requirements of section 238.1 of the Authority's rules and regulations. A hearing was held before the Authority on the dates of September 11th to 16th, inclusive, and September 19th to 22nd, inclusive. Following the hearing, briefs

* The City of New York, originally appearing under Rule 4(a) of the Rules of Practice, was granted permission to intervene upon oral motion made by counsel for the City of New York during the course of the proceedings.

were filed in support of the applications by American, Eastern, TWA, United, and the City of New York, N. Y., and by the City of Newark, N. J., in opposition thereto.

The decision in this case, under the orders of the Authority referred to above, involves two issues which, although separate, are to a degree interrelated. The first relates to the right of the applicants to engage in air transportation to and from New York, N. Y., in addition to Newark, N. J. The second involves permission to utilize a particular landing area or areas in rendering service to the points Newark, N. J., and New York, N. Y., in the event that the applications are granted.

The applications filed by American, Eastern, TWA and United are governed by the provisions of section 401 of the Act. Subsection (b) thereof relates to the filing of applications for certificates of public convenience and necessity; and subsection (d) (1) provides as follows:

> "The Authority shall issue a certificate authorizing the whole or any part of the transportation covered by the application, if it finds that the applicant is fit, willing, and able to perform such transportation properly, and to conform to the provisions of this Act and the rules, regulations, and requirements of the Authority hereunder, and that such transportation is required by the public convenience and necessity; otherwise such application shall be denied."

Subsection (h) provides in part as follows:

> "The Authority, upon petition or complaint or upon its own initiative, after notice and hearing, may alter, amend, modify, or suspend any such certificate, in whole or in part, if the public convenience and necessity so require . . . "

Both of these subsections establish public convenience and necessity as the standard under which the Authority must exercise its discretionary power in issuing or amending certificates of public convenience and necessity. Subsection (d) (1) also expressly prescribes an additional test, namely, whether a particular applicant is "fit, willing, and able" to perform the air transportation for which authorization is sought and to conform to the provisions of the Act and the rules, regulations, and requirements of the Authority. It will not be necessary in this opinion to decide whether the order of the Authority in this proceeding is properly issuable under section 401(d)(1) or 401(h) inasmuch as the record establishes that each of the applicants meets the additional test set down in section 401(d)(1). Each of the applicants has been engaged in scheduled airline operations for a substantial period of time, three of them operating an East-West transcontinental service and the fourth operating a North-South service from Miami, Fla., and Brownsville, Tex., in the south, to Newark, N. J., and Chicago, Ill., in the north. On the basis of this performance, it is clear that each of the applicants is fit, willing, and able to perform properly the air transportation for which authorization is sought, and to conform to the provisions of the Act, and the rules, regulations and requirements of the Authority thereunder, and we so find.

It now becomes necessary to determine whether or not the air transportation for which authorization is sought is required by the public convenience and necessity.

Congress has prescribed specifically certain of the elements which must be considered by the Authority in deciding what is in the public interest and in accordance with the public convenience and necessity. Section 2 of the Act, which embodies the declaration of policy, provides as follows:

"In the exercise and performance of its powers and duties under this Act, the Authority shall consider the following, among other things, as being in the public interest, and in accordance with the public convenience and necessity—

"(a) The encouragement and development of an air-transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense;

"(b) The regulation of air transportation in such manner as to recognize and preserve the inherent advantages of, assure the highest degree of safety in, and foster sound economic conditions in, such transportation, and to improve the relations between, and coordinate transportation by, air carriers;

"(c) The promotion of adequate, economical, and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices;

"(d) Competition to the extent necessary to assure the sound development of an air-transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense;

"(e) The regulation of air commerce in such manner as to best promote its development and safety; and

"(f) The encouragement and development of civil aeronautics."

It is apparent that the interest to be considered whenever, as in the present case, the public convenience and necessity becomes an issue, is the national interest; that the "public" whose convenience and necessity is to be served is not limited to the public within the corporate limits of any municipality. Congress has decreed that consideration shall be given to the encouragement and development of an air transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service and of the national defense. The phrase "foreign and domestic commerce" obviously does not connote a local interest. Nor does the phrase "the postal service and the national defense" describe local interests. Such interests transcend municipal and even state boundaries. In the present proceedings, therefore, we must consider the national interest as paramount, giving full consideration, however, to the interests represented by the Cities of New York and Newark in their relation to, and as a part of, the national public interest.

The issue here under consideration involves the general question of the needs of the New York-Northeastern New Jersey Metropolitan District* (hereinafter called the "Metropolitan District") with respect to air transportation service. According to the official figures of the 1930 Census, published by the United States Department of Commerce and referred to by a witness for Newark, N. J., this Metropolitan District has a total population of 10,901,424 contained in an area of 2,514 square miles. In population, the Metropolitan District is more than twice the size of the Chicago Metropolitan District, which ranks second in the nation, and it is almost 1,000 square miles greater in area than any other metropolitan district as recognized by the Bureau of the Census.

At the present time, Newark, N. J., through the Newark Airport, is the only point serving the Metropolitan District in so far as scheduled airline trans-

* This is the title used to describe the greater New York metropolitan area in the 1930 Census. The New Jersey Division refers to the part thereof lying within the State of New Jersey, and the New York Division of the Metropolitan District to that part lying within the States of New York and Connecticut.

portation is concerned. Newark, roughly speaking, is located in the western half of the area constituting the Metropolitan District and is accessible to most of the New Jersey territory within the Metropolitan District as well as to lower Manhattan. There is no point located in what may be described as the eastern half of the Metropolitan District readily accessible with respect to the greater part of the territory east of the Hudson River, to which airline service is authorized at present, with the exception of Route No. 23 operated by American, and we so find.

The New York Division, excluding the Borough of Richmond and Rockland County which lie west of the Hudson River, has a total population of 7,771,891 according to the 1930 Census. As shown by the record, the total value of products manufactured in the industrial area of this section, excluding Manhattan, during 1935 was roughly $1,367,360,000, or 24% of the total value of products manufactured in the entire New York Industrial Area.* It was testified that Westchester County and sections of Long Island within the Metropolitan District include large residential areas.

The combined population of the Boroughs of Queens and the Bronx alone is greater by almost a million people than any other city in the United States other than New York, N. Y., itself and Chicago, Ill., and the major part of this area is more than an hour removed from the Newark Airport. Westchester County, sections of Connecticut and the outlying sections of Long Island within the Metropolitan District have a combined population of 999,781, and they are still further removed from the Newark Airport. It is a well-known fact, and the record establishes, that these areas play an important part in the industrial and business activities of the nation. Interest in establishing adequate air transportation service to a community of this size and importance is more than local in scope; the national interest requires ready access to such a community.

Other evidence in the record establishes the need for more than one airport available for use in rendering air transportation service to the Metropolitan District as a whole.

Newark's first exhibit, strongly relied upon by this intervener, is a report submitted on November 29, 1927, by a special "Fact Finding Committee on Suitable Airport Facilities for the New York Metropolitan District". The Committee was appointed by the Honorable Herbert Hoover, then Secretary of Commerce, and was composed of twenty-four members, including representatives of the Mayors of Newark and New York, the Governor of New Jersey, the New Jersey State Chamber of Commerce, the Chambers of Commerce of Newark and the boroughs of New York City, the Department of Commerce, the Postmaster General, the United States Weather Bureau, various air transport companies and the Daniel Guggenheim Fund for the Promotion of Aeronautics. On page 5 of the report, the Committee makes the following statement:

> "As a result of the studies that have been made, it is felt that a general plan looking toward the development of a system, or series, of airports should be recommended which may be carried out as the increasing needs of commercial aeronautics and of private flying may require."

The following specific recommendations appear on page 8 of the report:

> "The most important need for any city to consider today in developing airport facilities is air transport, although the importance of aerial service is rapidly increasing.
>
> "The sites suggested as suitable airport locations for the Metropolitan

* A term appearing in the record which apparently describes a territory approximately the same as the Metropolitan District described supra, including Northeastern New Jersey.

District fall in six general localities which have been designated as follows:

1. The Queens-Flushing Bay Area
2. The Newark Bay Area
3. The Bronx-East River Area
4. The Hackensack Meadows Area
5. The Jamaica Bay Area
6. The Wall Street-Brooklyn Area

"From the point of view of air transport, airport facilities should be as close as practicable to the center of the Metropolitan District, and in the direction of flow of air traffic. For northern and northeastern air traffic, the natural point of arrival and departure is in either the Queens-Flushing Bay Area or the Bronx-East River Area. For southern and western traffic, the natural point of arrival and departure is in either the Newark Bay Area or the Hackensack Meadows Area.

"There is immediate necessity for an airport east of the Hudson River located in the Queens-Flushing Bay Area. . . .

"An airport is now being developed in the Newark Bay Area by the City of Newark . . . which is recommended by this Committee as first choice for the location of an airport in this area . . ."

The Committee thus recognized the need for an airport in the Newark Bay Area, and indicated a preference for the Newark Airport in this particular location, but at the same time it pointed out that there was, even in 1927, an immediate need for an airport in the Queens-Flushing Bay Area.

The "stacking"* of planes approaching the Newark Airport in bad weather also emphasizes the need of another completely equipped and accessible airport in the Metropolitan District. Aside from the anxiety experienced by passengers when "stacking" becomes necessary, the record shows a substantial loss of time as a result of delays from this cause. In the month of December, 1938, the applicants experienced a total of 21 delays ranging from eleven to thirty minutes. During the month of June, 1939, there occurred a total of 42 delays from eleven to thirty minutes, 16 delays from thirty-one to sixty minutes, and 17 delays over one hour. As many as eight planes approaching the Newark Airport have been "stacked" at one time, although Mr. Addems, Superintendent of Flight Operations for the Eastern Division of United, testified that "actual stacking" does not occur "more than ten per cent of the time." The rapid growth of air traffic requires relief of increasing congestion, and although the record fails to show how many schedules will include both stops if the use of another airport in the Metropolitan District is approved, testimony shows that the availability of two airports completely equipped for scheduled airline operation may be expected to improve this condition materially.

We find that the use of two airports for regularly scheduled air transportation service to and from the Metropolitan District, located so as to be readily accessible to the centers of population on each side of the Hudson River, is necessary at the present time, and that such use will encourage and assist the development of an air transportation system properly adapted to the future needs of the foreign and domestic commerce of the United States, the Postal Service, and the national defense.

This recognition of a single metropolitan area as calling for the identification of two separate points to be served within that area is an exceptional device.

* "Stacking" is a term used to describe the controlled distribution of aircraft converging on a given airport, when conditions of visibility are such as to preclude the safe separation of aircraft by means of pilot vision alone.

It is justified in this instance by such exceptional circumstances of population and area and industrial activity as have been recounted in the preceding paragraphs. The more normal expedient would be to receive and act on notices, as provided by section 238.3 of the Authority's regulations, proposing the service of a single point through two airports used together or in alteration. In the present instance, however, the public convenience and necessity require that the provision of air transportation to separate parts of the Metropolitan District be given the stability and the status that separate incorporation in the certificates provides; and, therefore, that we treat the Metropolitan District as constituting two points, corresponding to the two major subdivisions into which this exceptionally large metropolitan area can most naturally be arranged.

Under the provisions of the Act it is necessary to designate points to serve particular areas, and it is the established practice to name a city as a means of identifying the point to which service shall be rendered. We find that the designation of New York, N. Y., as the point will make it possible for the eastern part of the Metropolitan District to receive adequate air transportation service.

According to the evidence appearing in the record, conducting operations to an airport east of the Hudson River will entail an increase in the operating costs of the applicants. It is estimated that the recurring ground costs of the four applicants will increase approximately $500,000 a year if service is maintained through two airports, although this figure may be reduced somewhat by the fact that, because of the facilities available at the North Beach Airport in the Queens-Flushing Bay Area, American will centralize its offices and equipment for its entire system at this point, which will effect substantial savings in the company's annual operating costs. Because of the additional flying distance involved, United estimates an increase of $54,000 a year in direct flying costs. American did not submit an estimate of the annual increase in direct flying costs, but on two of its routes the distance will be greater, while on the route to Boston a saving will result in cases where schedules are originated or terminated at the North Beach Airport. From the figures given, an increased annual cost of about $50,000 for American in this category may be expected. Relief of congestion by the use of a second airport will result in some savings in direct flying costs through the reduction of flying time. The record does not contain a complete picture of the non-recurring costs which will result from moving equipment and personnel, etc., but the few figures available indicate that this expense will be comparatively low.

According to the testimony of traffic experts employed by three of the applicants, the use of a second airport located east of the Hudson River would result in a sufficient increase in passenger business to at least offset the increased operating expense. A witness for Eastern, however, expressed doubt that increased revenues would offset its increased operating cost, since that company is a North-South operator and a large part of its business is short haul. The population and importance of the part of the Metropolitan District lying east of the Hudson has been pointed out, however, and even if the testimony concerning the immediate increase in business expected as a result of the use of a second airport east of the Hudson River is disregarded, we find that making air transportation more directly available to such a large community of people justifies the additional expense involved.

The application of American seeks to have New York, N. Y., designated as an additional point to be served, whereas Eastern, TWA and United seek to have New York, N. Y., designated as a terminal point, at the same time

requesting a change in the designation of Newark, N. J., from that of a terminal point to that of an intermediate point. The applications of the last three companies, however, include a request that the Authority grant to the petitioners such other and different relief as it may determine to be proper.

We find, in view of the fact that the two points, Newark, N. J., and New York, N. Y., are within the same Metropolitan District, and in order to permit flexibility in the schedules of the applicants and their adjustment as the public interest may from time to time require, that these two points should be named as co-terminals.

On the basis of the foregoing findings of fact and the facts appearing in the record, we find that the specification of New York, N. Y., and Newark, N. J., as co-terminals on the routes described in the certificates involved in this proceeding, and the authorization to engage in air transportation to and from such points on each of the routes described in such certificates and with respect to the classes of traffic now authorized on each of said routes, subject to the provisions of such certificates, are required by the public convenience and necessity. In rendering service to these two points, the applicants should be authorized to originate or terminate schedules at either point, and to make stops at both points on any schedule.

It has been suggested in testimony presented at the hearing, that the amendments of the certificates involved in this proceeding would result in the virtual abandonment by the applicants of service to Newark, N. J., through the Newark Airport. Newark, however, will be retained in the certificates as a point to be served, and the statutory duty of the applicants to continue to render adequate service to such point will continue unaffected.

On September 6, 1939, the Authority ordered that, in addition to all matters which were required to be determined in the present proceeding pursuant to section 401 of the Act, there should be considered all questions relating to the airports to be used by each of the applicants in serving New York, N. Y., and Newark, N. J., and, should the Authority decide to approve any or all of the applications involved herein, the Authority might at that time dispose of said questions and to the extent that said questions are so disposed of, the applicant or applicants should be relieved of any necessity of complying with Article II of Regulation 401-F-1, now designated as section 238.3 of the rules and regulations, insofar as said articles would require the filing of any notice or notices with the Authority prior to the inauguration of the use of such airports.

Regulation 401-F-1 was promulgated pursuant to the express authority contained in section 401(f) of the Act, which insofar as pertinent, provides as follows:

> "Each certificate issued under this section shall specify the terminal points and intermediate points, if any, between which the air carrier is authorized to engage in air transportation and the service to be rendered; and there shall be attached to the exercise of the privileges granted by the certificate, or amendment thereto, such reasonable terms, conditions, and limitations as the public interest may require. . . ."

The Authority's order waiving the requirement of filing notice also supersedes Regulation 401-F-1 insofar as the necessity of issuing a show cause order is concerned, since it is expressly stated that all question relating to the airport to be used are to be considered in this proceeding. The applicants have requested permission to utilize the North Beach Airport, and the issue in this phase of the proceeding, therefore, is whether or not the public interest will be adversely affected by the use of the North Beach Airport by these applicants in conducting

regularly scheduled airline operations.

Section 2 of the Act, which sets forth specifically the elements to be considered in deciding what is in the public interest, has been quoted in the first part of this opinion. The only question is whether or not any of the objectives outlined therein will be jeopardized by the use of the North Beach Airport in rendering service to the east side of the Metropolitan District, herein identified as the point New York, N. Y.

The applicants and the City of New York have introduced into the record much evidence on the subject of the accessibility of the North Beach Airport. As shown by the maps contained in the exhibits for American and the City of New York, the site of the North Beach Airport is located in the Flushing Bay area of the Borough of Queens, approximately in the center of the part of the Metropolitan District east of the Hudson River and connected by express highways to the territory to the north and the rest of Long Island. The Boroughs of the Bronx and Queens, with respect to which it is the most accessible, have a combined population of 2,907,059, according to the latest estimates referred to in the record, and the major part of this area is more than one hour removed from the Newark Airport by ordinary means of ground transportation. It is also readily accessible to areas such as Westchester County to the north and the Oyster Bay section of Long Island, and the advantage over the Newark Airport with respect to this territory is even greater. Upper Manhattan likewise is closer to the North Beach Airport.

As to the relative convenience of the Newark and North Beach Airports to the Grand Central Station and the 42nd Street area of Manhattan, the evidence is somewhat conflicting. Fifty minutes is the present scheduled running time for busses from that area to the Newark Airport, according to the record, including the necessary time for taking tickets and loading baggage, and a witness for one of the airlines testified that it was planned to operate similar bus service to North Beach Airport on a thirty-five minute schedule, which would include time for the same procedure. Taking all of the evidence together, we find that the North Beach Airport is from ten to fifteen minutes closer to the 42nd Street area by ordinary means of ground transportation than is the Newark Airport.

In connection with this fact, the record shows that a substantial percentage of the passengers traveling into the Newark Airport at the present time are bound for the Grand Central area or north thereof. According to a survey of the passengers arriving on planes during the period August 29 to September 3, 1939, conducted by the City of Newark, 29% alighted from the bus at the Grand Central Station, or north thereof. These figures were checked with bus line records.

On the basis of the evidence, we find that the North Beach Airport is located so as to be readily accessible to the greater part of the eastern half of the Metropolitan District and that its use will materially improve air transportation service to large and important population centers.

We find, from an examination of the train schedules incorporated into the record, that excellent train service is available in the vicinity of both airports. Newark has the advantage for service to the south, whereas North Beach is more convenient for service to New England and points in New York State. Both airports afford good connections for service to the Midwest and West, although Newark offers a greater variety of connecting lines and more frequent schedules as a result.

According to exhibits submitted by the Post Office Department, the annual cost of transporting the mails from the Newark Airport into Manhattan, from which point all the mail for the City of New York is distributed, is greater than the estimated cost of transportation from the North Beach Airport by either railroad or truck. No estimates were submitted as to the cost of the joint use of both airports, but the witnesses appearing on behalf of the Post Office Department testified that the joint use of the North Beach and Newark Airports would improve the air mail service to the greater metropolitan area, and we so find.

The North Beach Airport, furthermore, includes a seaplane base which may be used for trans-Atlantic service, according to testimony appearing in the record. The use of this airport by the applicants will afford direct connections with seaplane operations, and we so find.

The fact that American, according to the evidence in the record, will centralize its shops and maintenance equipment at the North Beach Airport, and that complete airway traffic control equipment will be installed, constitutes a definite advantage with regard to the national defense, and we so find.

The "Fact Finding Committee on Suitable Airport Facilities for the New York Metropolitan District," referred to in the first part of this opinion, indicated in 1927 that there was *immediate* necessity for an airport in the Queens-Flushing Bay area, the precise area in which the North Beach Airport is located. If the necessity of an airport available for air transportation service in this area was so apparent to an impartial, fact-finding committee in 1927, the need today, in view of the tremendous increase in the importance of air transportation in the past twelve years, must be immeasurably greater. We find that the facts established in the first part of this opinion, relative to the size of the Metropolitan District and the need for two airports to adequately serve the eastern and western divisions thereof, lend further support to the conclusion that the use of the North Beach Airport will be in the public interest.

Conflicting evidence concerning the safety of the use of the North Beach Airport for scheduled airline operation appears in the record.

The present proceeding, arising under section 401 of the Act and regulation 401-F-1, promulgated under subsection (f) of section 401, is concerned primarily with economic considerations. The details of safe operation are governed by air carrier operating certificates and the rules and regulations issued by the Authority pursuant to the provisions of Title VI of the Act. Particular circumstances and conditions affecting the safety of airline operation must be met as they arise, in the light of progress in the art and science of aviation and on the basis of technical investigation and analysis. This matter will be handled in accordance with the statutory provisions governing safety, and the operation of the applicants at the North Beach Airport will not be permitted until the safety thereof has been established and air carrier operating certificates with respect thereto have been issued.

It was testified, however, by witnesses for the City of New York, that the site of the North Beach Airport had been approved by all responsible government officials and that it was fully equipped with the most modern safety devices. We find nothing in the record to establish that there is inherent in the location or the facilities of this airport anything which would preclude safe operation, or to compel the conclusion that the airport is unsafe. Accordingly, the Authority cannot find, on the basis of the record in this hearing, that the operation of the applicants from the North Beach Airport will be unsafe.

On the basis of the foregoing findings of fact and the facts appearing in the record, we find that the public interest will not be adversely affected by the use of the North Beach Airport in serving the point New York, N. Y., that such use will be in the public interest, and that American, Eastern, TWA, and United, the applicants in this proceeding, should be authorized to use such airport in serving such point, subject to the applicable provisions of the Act and the rules and regulations of the Authority adopted thereunder.

An appropriate order will be entered.

Branch, Ryan, Mason, Warner, Members of the Authority, concurred in the above opinion. Hinckley, Chairman, did not take part in the decision.

AIR SAFETY BOARD CHANGES

On August 22, 1939, the Air Safety Board of the Civil Aeronautics Authority had been functioning one year, and shortly thereafter it met and revised its officer personnel as follows: Thomas O. Hardin, Chairman; C. B. Allen, Vice-Chairman; and Sumpter Smith, Member. Just lately Sumpter Smith has resigned in order to accept full charge of the construction and establishment of the national airport at Washington, D. C. To date this vacancy on the Air Safety Board has not been filled.

CIVIL AERONAUTICS BULLETIN No. 4

The Civil Aeronautics Authority has announced the publication of Civil Aeronautics Bulletin No. 4, State Aeronautical Legislation Digest and Uniform State Laws. This brings to date (October 1, 1939) and supersedes Air Commerce Bulletin No. 18 (January 1, 1936) covering the same subject matter. The publication fills a great need and the active state coordination work of the Authority indicates that it will be kept up to date.

Chairman Hinckley of the CAA has now contacted the Governor of each State and the aviation personnel of each State, and CAA State Coordinator Elwood B. Cole has followed through with personal and other contacts to such an extent that he will shortly have covered the entire country. The response of the States has been unusually gratifying, and as a direct result several States, formerly having no aviation set-up, now have temporary aviation officials appointed by their respective Governors for the interim until necessary and proper legislation can be enacted. These States include Washington, Indiana and Missouri. In addition, New Hampshire has a newly appointed director; Texas is considering a legislative program; Oregon has appointed a new commission; and Virginia has had a change in personnel. A complete list of personnel with current changes can be had from George C. Roberts, Secretary, N.A.S.A.O., Illinois Aeronautics Commission, Springfield, Illinois.